Huron County

Solid Waste Management District

2023 – 2037

REVISED DRAFT

SOLID WASTE MANAGEMENT PLAN UPDATE

APRIL 2023

Prepared by:

GT ENVIRONMENTAL

TABLE OF CONTENTS

SECTIONS

CHAPTERS

APPENDICES

Section i. Solid Waste Management District Information

Table i-1. Solid Waste Management District Information

SWMD Name	**Huron County Solid Waste Management District**
Member Counties	Huron County
Coordinator's Name (main contact)	Pete Welch
Job Title	District Coordinator
Street Address	180 Milan Avenue
City, State, Zip Code	Norwalk, Ohio 44857
Phone	419-668-3092 ext. 1907
Fax	
E-mail address	petewelch@huroncountyswmd.com
Webpage	https://www.huroncountyswmd.com

Table i-2. Members of the Policy Committee/Board of Trustees

Member Name	Representing
Huron County	
Bruce "Skip" Wilde	County Commissioners
David Light	Municipal Corporations (City of Norwalk)
Richard Wiles	Townships (Norwich Township)
Tim Hollinger	Health Departments
John Swartz	Industrial Generators
Chris Hipp	Huron County Citizens
N/A	Public Interests

Table i-3. Chairperson of the Policy Committee or Board of Trustees

Name	Bruce "Skip" Wilde
Street Address	180 Milan Avenue
City, State, Zip Code	Norwalk, OH 44857
Phone	419-668-3092
Fax	
E-mail address	Swilde@huroncounty-oh.gov

Table i-4. Board of County Commissioners/Board of Directors

Commissioner Name	County
Terry Boose Chairperson	Huron
Harry Brady	
Bruce “Skip” Wilde	

Technical Advisory Committee

The District did not establish a technical advisory committee (TAC) for the preparation of this *Plan Update.*

CHAPTER 1. INTRODUCTION

A. Brief Introduction to Solid Waste Planning in Ohio

In 1988, Ohio faced a combination of solid waste management problems, including rapidly declining disposal capacity at existing landfills, increasing quantities of waste being generated and disposed, environmental problems at many existing solid waste disposal facilities, and increasing quantities of waste being imported into Ohio from other states. These issues combined with Ohio's outdated and incomplete solid waste regulations caused Ohio's General Assembly to pass House Bill (H.B.) 592. H.B. 592 dramatically revised Ohio's outdated solid waste regulatory program and established a comprehensive solid waste planning process.

There are three overriding purposes of this planning process: to reduce the amount of waste Ohioans generate and dispose of; to ensure that Ohio has adequate capacity at landfills to dispose of its waste; and to reduce Ohio's reliance on landfills.

B. Requirements of County and Joint Solid Waste Management Districts

1. Structure

Because of H.B. 592, each of the 88 counties in Ohio must be a member of a solid waste management district (SWMD). A SWMD is formed by county commissioners. A board of county commissioners has the option of forming a single county SWMD or joining with the board(s) of county commissioners from one or more other counties to form a multi county SWMD. Ohio currently has 52 SWMDs. Of these, 37 are single county SWMDs and 15 are multi county SWMDs.[1]

A SWMD is governed by two bodies. The first is the board of directors which consists of the county commissioners from all counties in the SWMD. The second is a policy committee. The policy committee is responsible for developing a solid waste management plan for the SWMD. The board of directors is responsible for implementing the policy committee's solid waste management plan.[2]

[1]Counties have the option of forming either a SWMD or a regional solid waste management authority (Authority). The majority of planning districts in Ohio are SWMDs, and Ohio EPA generally uses "solid waste management district", or "SWMD", to refer to both SWMDs and Authorities.

[2]In the case of an Authority, it is a board of trustees that prepares, adopts, and submits the solid waste management plan. Whereas a SWMD has two governing bodies, a policy committee and board of directors, an Authority has one governing body, the board of trustees. The board of trustees performs all of the duties of a SWMD's board of directors and policy committee.

2. Solid Waste Management Plan

In its solid waste management plan, the policy committee must, among other things, demonstrate that the SWMD will have access to at least 10 years of landfill capacity to manage all of the SWMD's solid wastes that will be disposed. The solid waste management plan must also show how the SWMD will meet the waste reduction and recycling goals established in Ohio's state solid waste management plan and present a budget for implementing the solid waste management plan.

Solid waste management plans must contain the information and data prescribed in Ohio Revised Code (ORC) 3734.53, Ohio Administrative Code (OAC) Rule 3745-27-90. Ohio EPA prescribes the format that details the information that is provided and the manner in which that information is presented. This format is very similar in concept to a permit application for a solid waste landfill.

The policy committee begins by preparing a draft of the solid waste management plan. After completing the draft version, the policy committee submits the draft to Ohio EPA. Ohio EPA reviews the draft and provides the policy committee with comments. After revising the draft to address Ohio EPA's comments, the policy committee makes the plan available to the public for comment, holds a public hearing, and revises the plan as necessary to address the public's comments.

Next, the policy committee ratifies the plan. Ratification is the process that the policy committee must follow to give the SWMD's communities the opportunity to approve or reject the draft plan. Once the plan is ratified, the policy committee submits the ratified plan to Ohio EPA for review and approval or disapproval. From start to finish, preparing a solid waste management plan can take up to 33 months.

The policy committee is required to submit periodic updates to its solid waste management plan to Ohio EPA. How often the policy committee must update its plan depends upon the number of years in the planning period. For an approved plan that covers a planning period of between 10 and 14 years, the policy committee must submit a revised plan to Ohio EPA within three years of the date the plan was approved. For an approved plan that covers a planning period of 15 or more years, the policy committee must submit a revised plan to Ohio EPA within five years of the date the plan was approved.

C. District Overview

The District formed originally in 1989 as a joint Solid Waste District with Erie County. Later, in 1993 The District separated from Erie County to form a single independent Solid

Waste Management District. The District consists of large rural areas with low population density. In 2020, Huron County reported a population of 58,168 people. The county consists largely of farmland, pasture, or forests with a few densely populated areas. The cities of Norwalk, Willard, and Bellevue consist of the highest population density with Norwalk claiming the highest density of the county. The rural setting will influence the opportunities and barriers for the District and the solid waste disposal/recycling programs that can be available to the District.

The SWMD's role is to administer the programs in the solid waste management plan. These programs are designed to reduce the reliance on landfills by focusing on ways to divert waste. Of equal importance is the monitoring of landfill capacity and lifespans to ensure any waste that is not able to be diverted gets properly disposed of. The economic landscape of landfills has remained constant, with competition among the various options in the region keeping landfill disposal fees low.

The Huron County SWMD's waste management strategy implores a variety of programs and approaches to divert waste away from landfills. The District of course landfills waste but makes considerable effort to recycle and compost any acceptable waste. In the reference year, the District maintained three curbside recycling services as well as sixteen drop off recycling locations, with six full time and ten part time drop off locations. Furthermore, two large private sector businesses, Rumpke and Republic, operate in the District and provide reasonable transport distances to process recyclables.

Collection services for trash are both private and publicly funded. The District used nine landfills in the reference year to dispose of waste. However, a majority of the SWMD's waste was transferred to other landfills out of the County.

A 2020 calculated diversion rate of 18% is below the State of Ohio's goal of 25% residential/commercial waste diversion. With the current strategies and opportunities mentioned within the plan, projections show the District's diversion rate will decrease over time. The focus of 2024 Plan will look to develop infrastructure opportunities as well as an atmosphere for residents and businesses to actively divert waste. This plan update focuses on long-term sustainability and addresses current challenges and gaps that may inhibit this.

D. Waste Reduction and Recycling Goals

As explained earlier, a SWMD must achieve goals established in the state solid waste management plan. The current state solid waste management plan is the *2020 Solid Waste Management Plan* (2020 State Plan), adopted November 2, 2019. The 2020 State Plan established ten goals as follows:

1. The SWMD shall provide its residents and commercial businesses with access to opportunities to recycle solid waste. At a minimum, the SWMD must provide access to recycling opportunities to 80% of its residential population in each county

and ensure that commercial generators have access to adequate recycling opportunities.

2. The SWMD shall reduce and recycle at least 25% of the solid waste generated by the residential/commercial sector.

3. The SWMD shall provide the following required elements: a website; a comprehensive resource guide; an inventory of available infrastructure; and a speaker or presenter.

4. The SWMD shall provide education, outreach, marketing and technical assistance regarding reduction, recycling, composting, reuse, and other alternative waste management methods to identified target audiences using best practices.

5. The SWMD shall incorporate a strategic initiative for the industrial sector into its solid waste management plan.

6. The SWMD shall provide strategies for managing scrap tires, yard waste, lead-acid batteries, household hazardous waste and obsolete/end-of-life electronic devices.

7. The SWMD shall explore how to incorporate economic incentives into source reduction and recycling programs.

8. The SWMD will use U.S. EPA's Waste Reduction Model (WARM) or an equivalent model to evaluate the impact of recycling programs on reducing greenhouse gas emissions.

9. The SWMD has the option of providing programs to develop markets for recyclable materials and the use of recycled-content materials.

10. The SWMD shall report annually to Ohio EPA regarding implementation of the SWMD's solid waste management plan.

SWMDs are encouraged but not required to demonstrate it will achieve both Goal 1 and Goal 2. Instead, SWMDs have the option of meeting either Goal 1 or Goal 2 for their solid waste management plans. This affords SWMDs with two methods of demonstrating compliance with the State's solid waste reduction and recycling goals. Many of the programs and services that a SWMD uses to achieve Goal 1 help the SWMD make progress toward achieving Goal 2 and vice versa.

A SWMD's solid waste management plan will provide programs to meet up to eight of the goals. Goal 9 (market development) is an optional goal. Goal 10 requires submitting annual reports to Ohio EPA, and no demonstration of achieving that goal is needed for the solid waste management plan.

See Chapter 5 and Appendix I for descriptions of the programs the District will use to achieve the ten goals.

CHAPTER 2 DISTRICT PROFILE

A. Profile of Municipal Jurisdictions

1. Counties in the Solid Waste Management District

The District was formed in 1989 and was originally comprised of Erie County as well In 1993, the Counties split so that now the District is compromised solely of Huron County. The District includes all incorporated and unincorporated territory within the member political subdivisions. A board of directors governs the District and is responsible for implementing the solid waste plan developed by the policy committee.

2. County Overview

Huron County is located in Northern Ohio and is positioned just over an hour away from the City of Cleveland. The County seat is the City of Norwalk which is the largest population center in the County. There are 19 townships and 4 cities within the County. The County consists of large rural areas with low population density. In 2020, Huron County reported a population of 58,168 people. The county is largely farmland, pasture, or forests with a few densely populated areas. The cities of Norwalk and Willard are densely populated with Norwalk claiming the highest density of the county.

B. Population

1. Reference Year Population

In 2020, Huron County was the 45th most populated county in Ohio out of 88 counties with 58,830 residents. Reference year population data is taken from the Ohio Development Services Agency Office of Statistical Research (ODSA, OSR). OSR provided populations for 2020 that were used for this report. Note: Ohio law requires that the entire population of a municipality located in more than one solid waste management district be added to the solid waste management district containing the largest portion of the jurisdiction's population. The District has three municipalities, Bellevue, Milan, and Plymouth, that have a majority of their population in a different District, therefore the population was subtracted in Table 2-1a below.

Table 2-1a. Population of District in Reference Year

	Huron
Before Adjustment	58,565
Additions	0
Subtractions	4,735
After Adjustment	53,830

Source(s): Population and Households: 2020, 2010, and 2000" prepared by Ohio Development Services Agency, Office of Research

2. Population Distribution

Table 2-1 below shows the largest community in Huron and the size of the community relative to the total population. The largest city in Huron County is Norwalk with a population of 16,827, accounting for almost 31% of the County's population.

Table 2-1 Population of District in Reference Year

County		Largest Political Jurisdiction		
Name	**Population**	**Community Name**	**Population**	**Percent of Total County Population**
Huron	53,830	City of Norwalk	16,827	31%

Table 2-2 shows distribution of the population in cities, villages, and townships, as well as the distribution of the population in incorporated and unincorporated areas.

Table 2-2. Population Distribution in the Reference Year

County	Percent of Population in Cities	Percent of Population in Villages	Percent of Population in Unincorporated Township
Huron	43%	13%	45%

3. Population Change

According to the Ohio Development Services Agency (ODSA), Office of Statistical Research, Huron County's Population increased steadily from 1960 to 2010 and then declined by 2.5% from 2010 to 2019. During the same period, Ohio's population grew by 1.4%.

Huron County

Total Population

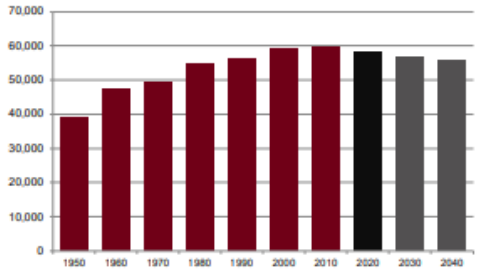
Census

1800		1910	34,206
1810		1920	32,424
1820	6,675	1930	33,700
1830	13,341	1940	34,800
1840	23,933	1950	39,353
1850	26,203	1960	47,326
1860	29,616	1970	49,587
1870	28,532	1980	54,608
1880	31,609	1990	56,240
1890	31,949	2000	59,487
1900	32,330	2010	59,626

2020	58,565

Projected

2030	56,950
2040	55,500



Source(s): Ohio Development Services Agency, "Ohio County Profiles Huron County", 2020.

4. Implications for Waste Management

The profile of the SWMD can provide insight into solid waste management planning. Factors like population density, poverty rates, employment rates, and housing characteristics can apply when assessing the needs and shortcomings of a SWMD.

Huron County Profile shows demographically the amount of people living in unincorporated townships is relatively low at 34%. Most of the population lives in centralized villages and towns such as Norwalk and Willard. With most of the population living in cities and villages the majority of the residents have access to curbside services as well as drop off locations for recycling waste. This bodes well for the SWMD as much of their population has and will continue to have ample opportunities to recycle (as shown in Appendix J). However, the challenge remains in getting residents to take the time and effort to recycle, simply because there are opportunities does not mean they will be taken. Those residents who live farther from cities and villages must take their recyclables to a drop off. Huron maintains three full time rural drops offs and six part time rural drop offs (see Appendix B for more information).

Huron County has 22,935 housing units, of which 30% are renter occupied. Typically, renters are more mobile in their lives than homeowners. They are not tied to a specific location for longer than their lease. As a result, it may prove difficult to get adequate engagement levels out of renters. In rental housing, there are challenges with both the tenant and the landlord in outreach and implementing (costs, participation, etc.) recycling programs. Due to the frequent changes of this demographic, education and outreach is needed to encourage recycling opportunities.

The median household income in Huron County is $52,560 a year and only 9% of the county's population lives in poverty. This is encouraging for the SWMD's efforts to promote recycling as income deprivations restrict abilities for basic services such as trash disposal and recycling. With the population generally being well above the poverty line, challenges with the cost hurdles to recycle lessen.

C. Profile of Commercial and Institutional Sector

Huron County has a strong labor force by percentage. Approximately 27,700 residents are included in the civil labor force, of which 90.5% are employed. By employment type, the top three sectors are: Trade, Transport, and Utilities (28%); Education and Health Services (21%); and Local Government (18%). All sectors in Huron County are growing, except for the information sector which saw a nearly 40% decrease since 2013.

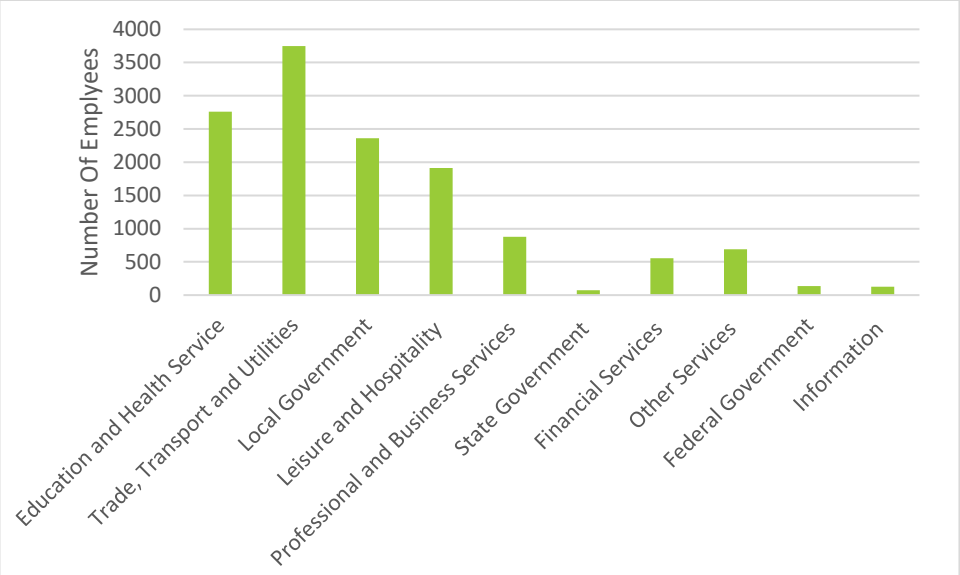


Figure 2.2 Employment Sectors

D. Profile of Industrial Sector

In 2019, Huron County had 256 goods-producing establishments (industrial sector) which include natural resource mining, construction, and manufacturing. The manufacturing sector had the highest employment with 72% of all the industrial sector. Construction (20%) and mining (8%) account for the remainder. All three sectors have seen growth in the number of establishments from 2013. Mining has increased by 11.5%, construction by 1.5%, and manufacturing by 2.2%.

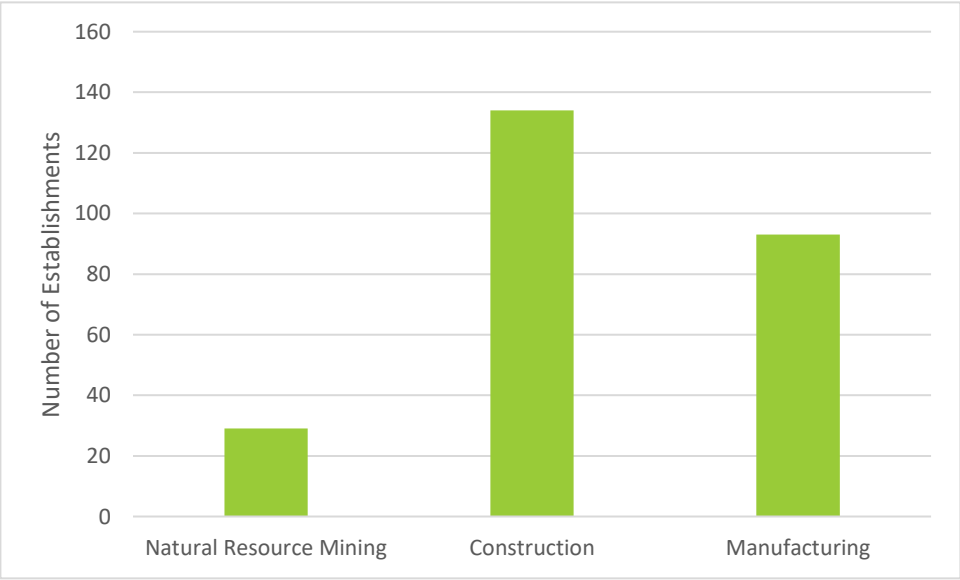


Figure 2.3 Industrial Establishments

E. Other Characteristics

Huron County is a predominantly rural county with almost half of the population residing in unincorporated areas. Townships embody the values of “grassroots governments”. A limited government structure drives the nature of programming and direction. Township officials have not placed emphasis on levying taxes to deliver recycling services. With higher percentages of population in the townships the majority of residents are served by programs that require individual homeowners to voluntarily sign up and pay additional cost for curbside recycling. Low disposal costs in the region, higher recycling processing costs, and low recycling commodity values contribute to create more challenges to rural township recycling. Additionally, curbside recycling is typically more cost effective in urban areas where streets and buildings are close together. The lower population density of rural towns usually cannot support the cost of curbside collection.

CHAPTER 3. WASTE GENERATION

Purpose of Chapter 3

This chapter of the solid waste management plan provides a summary of the SWMD's historical and projected solid waste generation. The policy committee needs to understand the waste the SWMD will generate before it can make decisions regarding how to manage the waste. Thus, the policy committee analyzed the amounts and types of waste that were generated within the SWMD in the past and that could be generated in the future.

The SWMD's policy committee calculated how much solid waste was generated for the residential/commercial and industrial sectors. Residential/commercial waste is essentially municipal solid waste and is the waste that is generated by a typical community. Industrial solid waste is generated by manufacturing operations. To calculate how much waste was generated, the policy committee added the quantities of waste disposed of in landfills and reduced/recycled.

The SWMD's policy committee obtained reduction and recycling data by surveying communities, recycling service providers, collection and processing centers, commercial and industrial businesses, owners and operators of composting facilities, and other entities that recycle. Responding to a survey is voluntary, meaning that the policy committee relies upon an entity's ability and willingness to provide data. When entities do not respond to surveys, the policy committee gets only a partial picture of recycling activity. How much data the policy committee obtains has a direct effect on the SWMD's waste reduction and recycling and generation rates.

The policy committee obtained disposal data from Ohio EPA. Owners/operators of solid waste facilities submit annual reports to Ohio EPA. In these reports, owners/operators summarize the types, origins, and amounts of waste that were accepted at their facilities. Ohio EPA adjusts the reported disposal data by adding in waste disposed in out-of-state landfills.

The policy committee analyzed historic quantities of waste generated to project future waste generation. The details of this analysis are presented in Appendix G. The policy committee used the projections to make decisions on how best to manage waste and to ensure future access to adequate waste management capacity, including recycling infrastructure and disposal facilities.

A. Solid Waste Generated in Reference Year

Waste generation is the amount of materials that enter the waste stream before any diversion or disposal efforts are conducted. To determine waste generation, estimates are used from several sources of data including:

- Ohio EPA Facility Data (some facilities are required to submit annual reports to the Ohio EPA)

- Surveys of commercial and industrial business recyclers, buybacks, brokers, and scrap dealers (these are voluntary and rely on the willingness of the company to respond and provide data).
- Ohio EPA MRF Reports (Ohio EPA collects data from commercial big box stores" and material recovery facilities).

In 2020, The District generated 108,700 tons of total waste. Waste generation is calculated as waste disposed + waste diverted.

Figure 3.1 Waste Generation

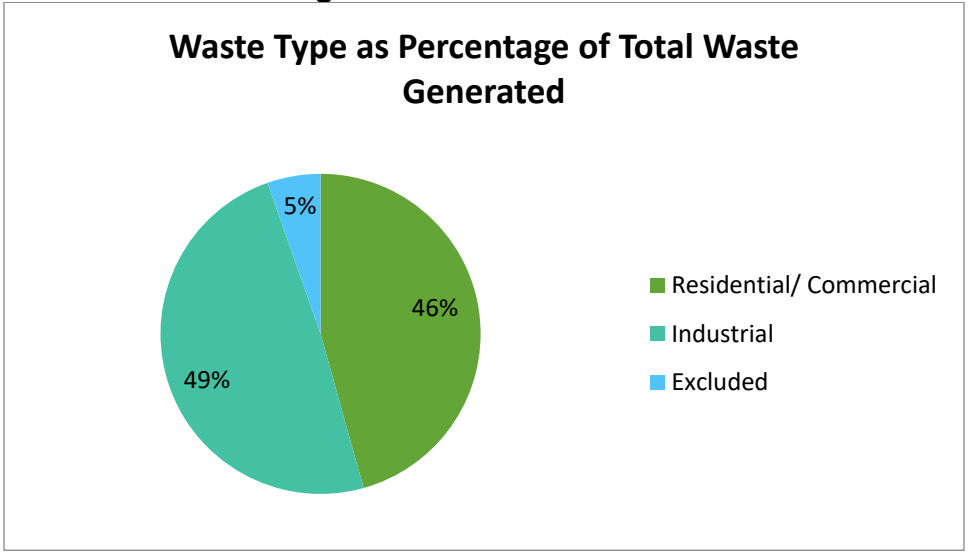


Table 3-1 Solid Waste Generated in Reference Year

Type of Waste	Quantity Generated (tons)
Residential/ Commercial	49,632
Industrial	53,225
Excluded	5,843
Total	108,700

1. **Residential/ Commercial Waste Generated in the Reference Year**
   The District generated 49,632 tons of waste in the residential/commercial sector. This estimate of generation indicates each person generates 5.05 pounds per day. Benchmarking Huron's per capita generation shows that the District is below average relative to its peers of similar size and composition, as shown in Table 3-2. The primary challenge for the District is to find proactive ways to reduce the total waste generated as well as lowering the disposal rate.

Table 3-2 Benchmark Per Capita Residential/ Commercial Solid Waste

County Name	Per Capita (lbs/person/day)
Huron	5.05
Holmes	4.52
Erie	6.73
Darke	6.89
Auglaize	4.06

2. Industrial Waste Generated in the Reference Year

The industrial sector generated 53,225 tons of waste in the reference year. This accounted for 49% of the total amount of waste generated by the District.

3. Excluded Waste Generated in the Reference Year

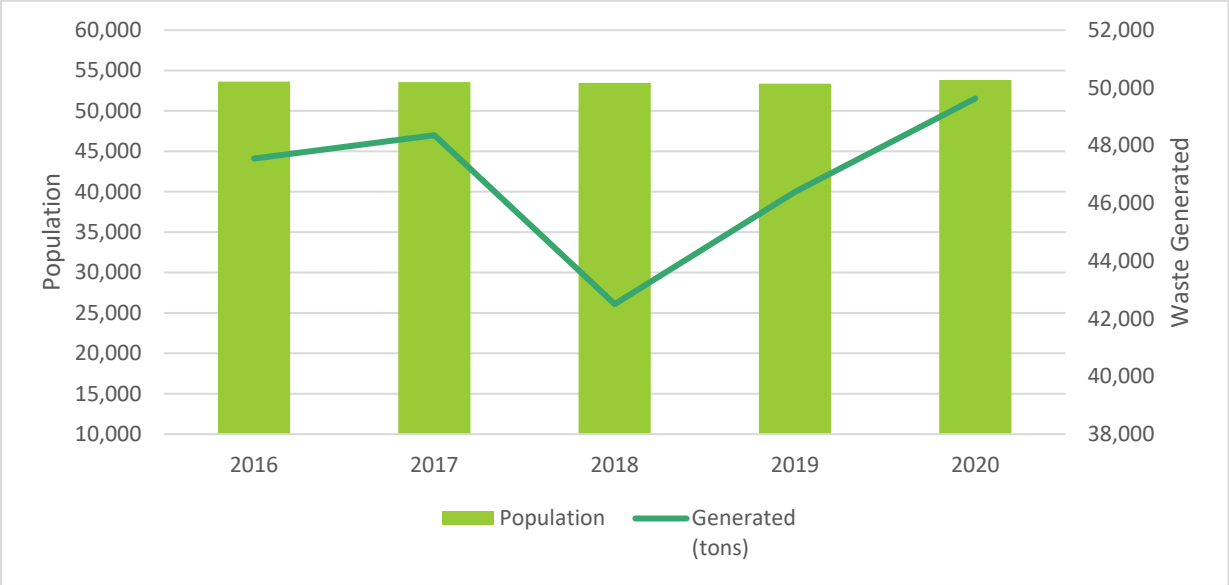
Excluded waste is waste material exempt from the definition of solid waste in ORC 3734.01. All exempt waste is also fee exempt. Ohio EPA Format 4.1 adds a threshold for exempt waste which excludes exempt waste from calculations if it is less than 10% of total waste disposed. Exempt waste for the Huron District accounts for 11% of the waste disposal and is considered in the analysis of this plan.

B. Historical Waste Generated

1. Historical Residential/Commercial Waste Generated

Historical residential/commercial waste generated has remained relatively consistent over the last five years. The dip from 2017 to 2018 is due to a decrease from roughly 10,500 tons recycled to roughly, 4,500 tons recycled. Recycling data is collected through voluntary reporting and by nature succumbs to data fluctuation. It is possible that 2018 was a bad reporting year for recycling, hence the sharp decrease. After the low in 2018, waste generated rose for the following years until reaching it's peak in 2020 of approximately 50,000 tons of waste generated. Population during this time remained flat, with only minimal changes year over year. Figure 3-2 below details these trends over the previous five years below.

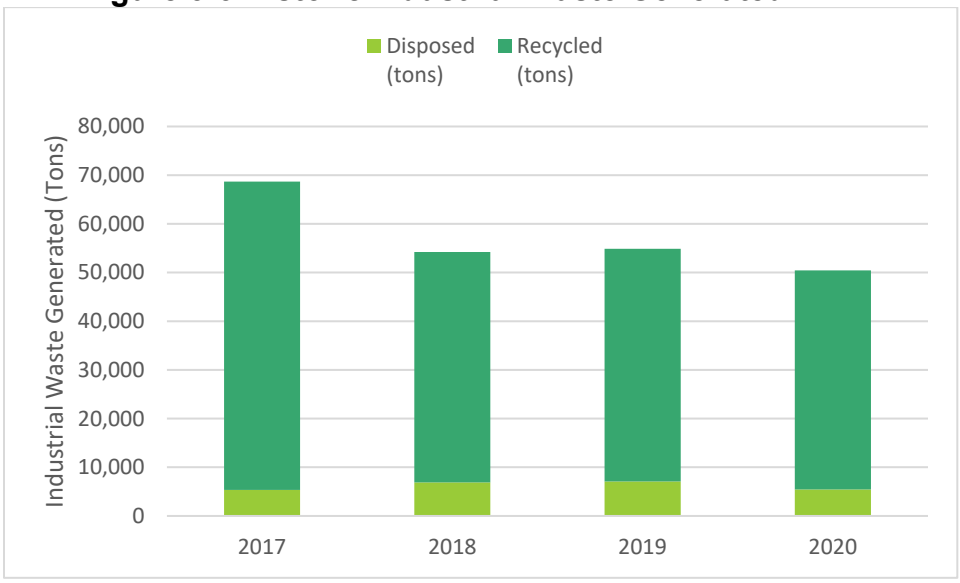
Figure 3-2 Historical Residential/Commercial Waste Generation



2. Historical Industrial Waste Generated

Industrial waste generation has decreased over the last five years. Except for 2019, every year saw a decrease in the total generation of industrial waste. The large decrease from 2017 to 2018 (a dip of 21%) resulted from the total tons of industrial recycling conducted during that year. This significant drop stems from data from other recycling facilities in 2017. The total tons recycled from this source in 2017 was approximately 12,000 whereas in 2018 it was roughly 2015. It is possible there was an error in the data reporting or double counting which resulted in the outlier number that year. The District's industrial recycling rate was between 87% and 92% during this time.

Figure 3-3 Historic Industrial Waste Generated



B. Waste Generation Projections

Table 3-3 presents the projected waste generation for the first 6 years of the planning period.

Table 3-3 Waste Generation Projections

Year	Residential Commercial Waste	Industrial Waste	Excluded Waste	Total
	Waste (tons)	Waste (tons)	Waste (tons)	Waste (tons)
2024	53,589	54,187	6,672	114,448
2025	54,592	53,878	6,672	115,142
2026	55,599	53,571	6,672	115,842
2027	56,607	53,265	6,672	116,544
2028	57,604	52,962	6,672	117,238
2029	58,602	52,660	6,672	117,934

Residential/commercial historical and reference year data assist in forecasting waste generation. Residential and commercial waste is anticipated to steadily increase throughout the planning period. The increase in generation is based on historical data and trends the District has seen. A flat increase of 1,000 tons annually was applied to the residential and commercial sector disposal.

To project the industrial sector generation, the District researched economic indicators. The District used the Ohio Job Outlook Projections for Northeast Ohio. These projections estimate a 0.57% decrease in Northeast Ohio's industrial sector disposal. Since the industrial waste generated is directly tied to how productive the industrial sector is, the District used this 0.57% decrease to project industrial waste disposal.

Excluded waste is projected to increase a flat amount of 6,672 tons each year. This is the 10-year average of historical data for the District. There was a not enough adequate information on the changes and historical data for excluded waste. As a result, the above number is used as a constant increase annually.

Examination and forecasting explanations are provided in more detail in Appendices D, E, F, and G.

CHAPTER 4. WASTE MANAGEMENT

Purpose of Chapter 4 (Content in this box is authored by Ohio EPA)
Chapter 3 provided a summary of how much waste the SWMD (refers to both SWMDs and Authorities) generated in the reference year and how much waste the policy committee estimates the SWMD will generate during the planning period. This chapter summarizes the policy committee's strategy for how the SWMD will manage that waste during the planning period.

A SWMD must have access to facilities that can manage the waste the SWMD will generate. This includes landfills, transfer facilities, incinerator/waste-to-energy facilities, compost facilities, and facilities to process recyclable materials. This chapter describes the policy committee's strategy for managing the waste that will be generated within the SWMD during the planning period.

To ensure that the SWMD has access to facilities, the solid waste management plan identifies the facilities the policy committee expects will take the SWMD's trash, compost, and recyclables. Those facilities must be adequate to manage all of the SWMD's solid waste. The SWMD does not have to own or operate the identified facilities. In fact, most solid waste facilities in Ohio are owned and operated by entities other than the SWMD. Further, identified facilities can be any combination of facilities located within and outside of the SWMD (including facilities located in other states).

Although the policy committee needs to ensure that the SWMD will have access to all types of needed facilities, Ohio law emphasizes access to disposal capacity. In the solid waste management plan, the policy committee must demonstrate that the SWMD will have access to enough landfill capacity for all of the waste the SWMD will need to dispose of. If there isn't adequate landfill capacity, then the policy committee develops a strategy for obtaining adequate capacity.

Ohio has more than 30 years of remaining landfill capacity. That is more than enough capacity to dispose of all of Ohio's waste. However, landfills are not distributed equally around the state. Therefore, there is still the potential for a regional shortage of available landfill capacity, particularly if an existing landfill closes. If that happens, then the SWMDs in that region would likely rely on transfer facilities to get waste to an existing landfill instead of building a new landfill.

Finally, SWMD has the ability to control which landfill and transfer facilities can, and by extension cannot, accept waste that was generated within the SWMD. The SWMD accomplishes this by designating solid waste facilities (often referred to flow control). A SWMD's authority to designated facilities is explained in more detail later in this chapter.

A. Waste Management Overview

The Huron County SWMD manages waste through a combination of landfills, recycling programs and facilities, transfer stations, and composting facilities.

Figure 4-1 presents the total waste generation management in the reference year. Approximately 52% of waste is being diverted from the landfill, meaning the majority of waste is being recycled or composted instead of disposed of in landfills.

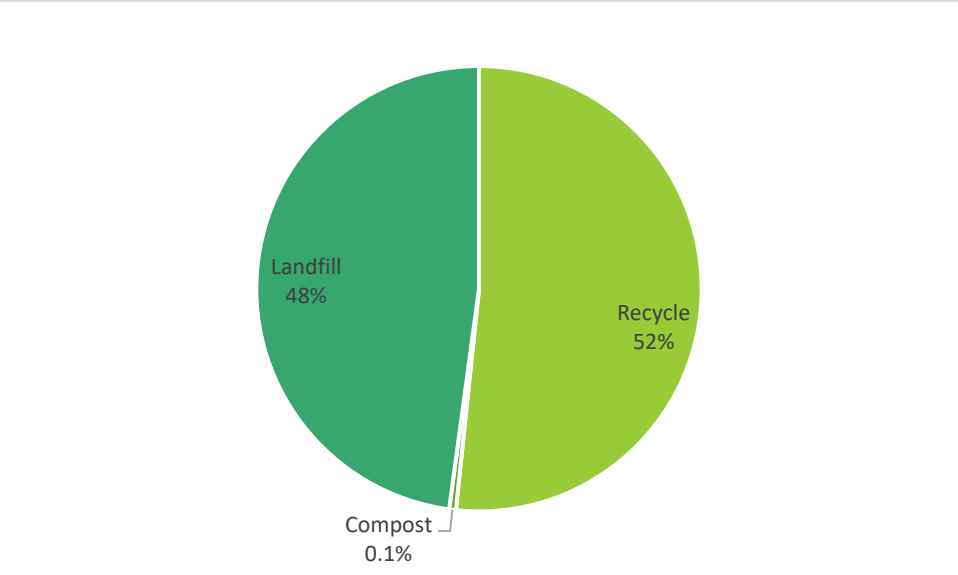


Figure 4-1 Methods of Managing Waste

Table 4-1 below presents the expected waste generation for the first six years of the planning period with 2020 serving as the reference year. The District is projected to have an increase in total waste generation. This comes from the projected increase in landfilled waste. Recycling is projected to decrease slightly.

Table 4-1 Methods for Managing Waste

Year	Total Waste[1]	Recycle[2]	Compost[3]	Transfer Landfill[4]	Direct Haul Landfill[5]
2020	***108,701***	***56,154***	***527***	***42,172***	***9,849***
2024	114,448	54,973	527	47,787	11,160
2025	115,142	54,710	527	48,563	11,342
2026	115,842	54,453	527	49,340	11,523
2027	116,544	54,197	527	50,116	11,704
2028	117,238	53,933	527	50,893	11,886
2029	117,934	53,670	527	51,669	12,067

Source:
[1]Reference Year Appendix Table G-1 and Projections Table G-2
[2]Reference Year Appendix Table E-5 and Projections Table K-3 subtracting compost
[3]Reference Year Appendix Table B-5 and Projections Table E-7
[4]Reference Year Appendix Table D-2 and Projections Table D-5
[5]Reference Year Appendix Table D-3 and Projections Table D-5
Includes exempt waste and Landfill column includes Transfer waste.
Sample Calculation:
Total Waste= Recycle + Compost + Total Landfill

B. Profile of Waste Management Infrastructure

This section identifies the waste management infrastructure available to the District in the reference year and assesses gaps and/or needs to handle expected growth.

1. Landfill Facilities

   A wide variety of waste is disposed of in landfill facilities. This includes waste generated from households, commercial businesses, institutions, and industrial activity. In some cases, if permitted, asbestos, construction demolition debris, dewatered sludge, contaminated soil, and ash may be disposed of in solid waste landfills. Industrial waste includes excluded wastes and are classified as slag, uncontaminated earth, non-toxic fly ash, spend non-toxic foundry sand and material from mining, construction, or demolition operations.

   Public, private, or self-haul provide waste collection services in the SWMD. The waste generated flows to the available landfills either by direct haul or from a transfer facility. There are no landfill facilities located within the SWMD, all waste is disposed of outside the District. No waste from the District was sent outside state boundaries.

2. Transfer Stations

   Transfer facilities are strategically located where solid waste, delivered by companies or residents, is gathered, temporarily stored, and loaded into transport vehicles that take the waste to its destination landfill or processing facility. In instances where waste is hauled from a transfer facility to a landfill, the county of origin is not recorded at the landfill. This makes accurately tracking waste origin challenging as some loads of trash may include waste from several counties. For planning purposes, the waste hauled through transfer facilities is listed separately and, when possible, the possible destination landfill is identified.

   Waste is either direct hauled to a landfill or transported to a transfer facility where it will be transferred to a landfill at a later date. About 81% of total waste generated is sent to a transfer facility before being disposed of in a landfill. During the reference year, most of the waste (99.9%) was sent to the Huron County Solid Waste Facility and transferred to the Noble Road Landfill in Richland County. The remainder was sent to the Broadview Heights Transfer Facility in Cuyahoga County. Both landfill destinations are owned and operated by Rumpke Waste.

   Approximately 87% of the transferred waste was from the residential/commercial sector with industrial waste accounting for 13% and excluded waste accounting for 1%.

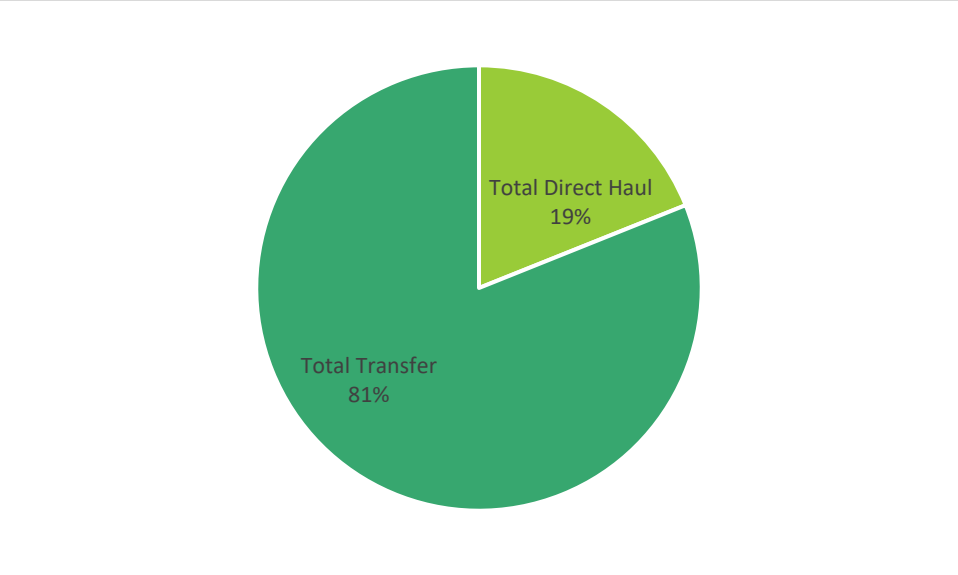


Figure 4-2 Disposal Management Methods

3. Composting Facilities

   The District has four compost collection operations used in the reference year. Greenwich Composting Facility, Village of New London, and Sand Road Ent Inc are all composting locations within Huron County. The final collection facility, Corso's Perennials, is located within Erie County. According to the Ohio EPA, all four are classified as Class IV facilities.

4. Processing Facilities

   One processing facility reported receiving recyclable materials from the District. This is the Richland County Recycling and Transfer Facility and is classified as a material recovery facility (MRF). This is a publicly owned facility.

C. Solid Waste Facilities Used in the Reference Year

1. Landfill Facilities

   Table 4-2 below details the landfills receiving waste from Huron SWMD in the reference year. The landfills listed below are from direct haul only, i.e., not transferred through a facility.

Table 4-2 Landfill Facilities Used by The District in the Reference Year

Facility Name	Location		Waste Accepted from SWMD (tons)	Percent of all SWMD Waste Disposed	Remaining Capacity (years)
	County	State			
In-District					
NA		Ohio		0%	
		Ohio		0%	
Out-of-District					
Crawford County Landfill	Crawford	Ohio	130	1%	25
Erie County Landfill	Erie	Ohio	8,649	88%	45
American Landfill, Inc	Stark	Ohio	7	0%	97
Wood County Landfill	Wood	Ohio	1	0%	3
Evergreen Recycling and Disposal	Wood	Ohio	8	0%	36
Lorain County Landfill LLC	Lorain	Ohio	2	0%	16
Sunny Farms Landfill LLC	Seneca	Ohio	7	0%	7
Rumpke of Northern OH Inc Noble Road Landfill	Richland	Ohio	344	3%	17
Port Clinton Landfill	Ottawa	Ohio	700	7%	5
Out-of-State					
NA				0%	
				0%	
Total			9,849	100%	251

Source: "Analytics Solid Waste Flows to Landfills and Incinerators in Ohio" Table 14
Appendix D, Table D-1
Sample Calculations: Residential/Commercial + Industrial + Excluded = Total

2. Transfer Facilities

Table 4-3 lists the transfer facilities receiving waste from Huron County in the reference year before landfilling.

Table 4-3 Transfer Facilities Used by the District in the Reference year

Facility Name	Location		Waste Accepted from District (tons)	Percent of all District Waste Transferred	Landfill Where Waste was Taken to be Disposed
	County	State			
In-District					
Huron County Solid Waste Facility	Huron	Ohio	36,793	100%	Noble Road Landfill
Out-of-District					
Rumpke Waste Inc Broadview Heights Transfer Facility	Cuyahoga	Ohio	1	0%	Noble Road Landfill
Out-of-State					
NA				0%	
Total			36,794	100%	0

Source: "2020 Ohio Facility Data Report Tables". Ohio EPA.
Appendix D, Table D-2
Sample Calculations: Residential/Commercial + Industrial + Excluded = Total

3. Compost Facilities

Table 4-4 lists the permitted composting facilities receiving materials from Huron County in the reference year.

Table 4-4 Composting Facilities Used by The District in the Reference Year

Facility Name	Location (County)	Material Composted (tons)	Percent of all Material Composted
In District			
Greenwich Composting Facility	Huron	87	20%
Village of New London	Huron	112	25%
Sand Road Ent Inc	Huron	185	41%
Out-of-District			
Corso's Perennials	Erie	62	14%
	Total	447	100%

4. Processing Facilities

Table 4-5 lists the processing facilities receiving materials from Huron County in the reference year.

Table 4-5 Processing Facilities Used by The District in the Reference Year

Name of Facility	Location		Facility Type	Recyclables Accepted from District (tons)
	County	State		
In-District				
NA		OH		
Out-of-District				
Richland County Recycling and Transfer Facility	Richland	OH	MRF	792
Out-of-State				
NA				
			Total	**792**

Source:
Appendix B, Table B-7

D. Use of Solid Waste Facilities Used in the Reference Year

The District remains at sufficient access to municipal solid waste landfill capacity and access to transfer facilities to manage waste for the planning period. Landfill capacity remains adequate and exceeds the volume of waste generated.

Huron SWMD is not expecting changes in the management of waste throughout the planning period. Based on historical trends, the District expects the planning period to be similarly managed, as shown in figure 4-3 below. There are also no expected changes to be made in the management of recyclable materials and the facilities which handle them. Additional capacity is not needed.

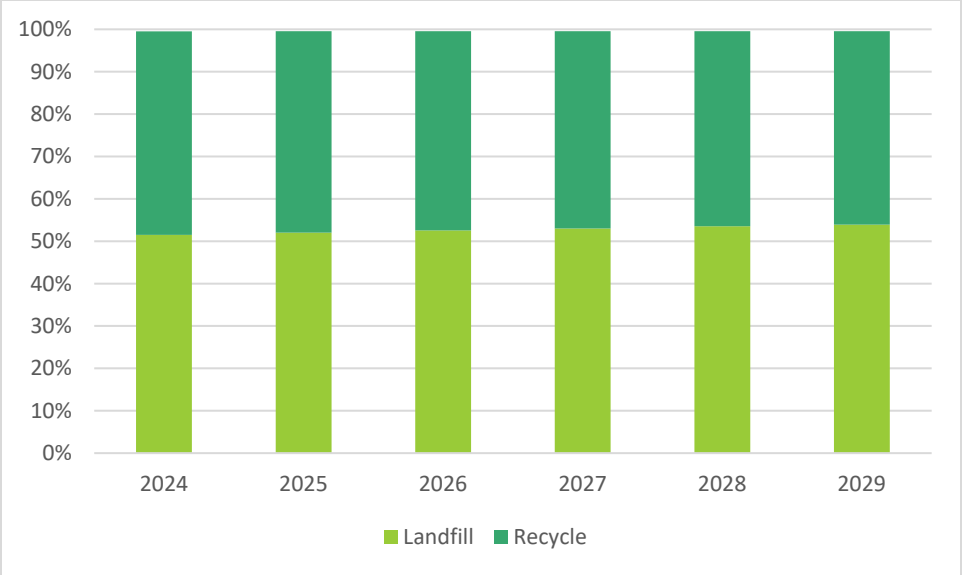


Figure 4-3 Planning Period Management Methods

E. Siting Strategy

As explained earlier, the solid waste management plan must demonstrate that the SWMD will have access to enough capacity at landfill facilities to accept all of the waste the SWMD will need to dispose of during the planning period. If existing facilities cannot provide that capacity, then the policy committee must develop a plan for obtaining additional disposal capacity.

The District does not, as a part of this Plan, intend to site any District owned or operated facilities for the transfer or disposal of municipal solid waste. The following addresses the possibility that another party wishes to site a solid waste transfer, disposal, recycling, or resource recovery facility in any location that is located in this District.

The District Board of Directors shall review general plans and specifications under the rules adopted by the Board and determine whether the solid waste facility proposal complies with the Plan. If the Board decides that it will facilitate the review process, the Board may appoint a Siting Committee within sixty days of receipt of plans and specifications under the siting rules. The Siting Committee may include the individuals, or their representatives listed herein, in addition to any other individuals that the Board determines would provide information relevant to the Board's determination of whether the proposed solid waste transfer, disposal, recycling or resource recovery facility or a proposal to modify an existing facility complies with the Plan. The Board may designate a Committee Chair, who will be responsible to facilitate the work of the Siting Committee and to prepare a report to the Board if requested. See Appendix S for additional requirements.

F. Designation

Purpose of Designation (authored by the Ohio EPA)

Ohio law gives each SWMD (refers to both SWMDs and Authorities) the ability to control where waste generated from within the SWMD can be taken. Such control is generally referred to as flow control. In Ohio, SWMDs establish flow control by designating facilities. SWMDs can designate any type of solid waste facility, including recycling, transfer, and landfill facilities.

Even though a SWMD has the legal right to designate, it cannot do so until the policy committee specifically conveys that authority to the board of directors. The policy committee does this through a solid waste management plan. If it wants the SWMD to have the ability to designate facilities, then the policy committee includes a clear statement in the solid waste management plan giving the designation authority to the board of directors. The policy committee can also prevent the board of directors from designating facilities by withholding that authority in the solid waste management plan.

Even if the policy committee grants the board of directors the authority to designate in a solid waste management plan, the board of directors decides whether to act on that authority. If it chooses to use its authority to designate facilities, then the board of directors must follow the process that is prescribed in ORC Section 343.014. If it chooses not to designate facilities, then the board of directors simply takes no action.

Once the board of directors designates facilities, only designated facilities can take the SWMD's waste. That means, no one can legally take waste from the SWMD to undesignated facilities and undesignated facilities cannot legally accept waste from the SWMD. The only exception is in a situation where, the board of directors grants a waiver to allow an undesignated facility to take the SWMD's waste. Ohio law prescribes the criteria that the board must consider when deciding whether to grant a waiver and how long the board must decide on a waiver request.

1. Description of the SWMD's Designation Process

In the approved Plan under which the District is currently operating, the District is authorized to establish facility designations in accordance with Sections 343.013, 343.014, and 343.015 of the Ohio Revised Code. The District has designated the Huron County Transfer Station as the only facility to which municipal solid waste generated in the District may be taken per 343.013 and the resolution contained in Appendix P.

2. List of Designated Facilities

The sole designated facility for the SWMD is the Huron County Transfer Station as shown below in table 4-6.

Table 4-6 Facilities Currently Designated

Facility Name	Location		Facility Type
	County	State	
In-District			
Huron County Transfer Station	Huron	Ohio	Transfer Station

CHAPTER 5. WASTE REDUCTION AND RECYCLING

As was explained in Chapter 1, a SWMD must have programs and services to achieve reduction and recycling goals established in the state solid waste management plan. A SWMD must also ensure that there are programs and services available to meet local needs. The SWMD may directly provide some of these programs and services, may rely on private companies and non-profit organizations to provide programs and services, and may act as an intermediary between the entity providing the program or service and the party receiving the program or service.

Through achieving the goals of the *State Plan* and meeting local needs, the SWMD ensures that a wide variety of stakeholders have access to reduction and recycling programs. These stakeholders include residents, businesses, institutions, schools, and community leaders. Programs and services collectively represent the SWMD's strategy for furthering reduction and recycling within its jurisdiction.

Before deciding upon the programs and services that are necessary and will be provided, the Policy Committee performed a strategic, in-depth review of the District's existing programs and services, recycling infrastructure, recovery efforts, finances, and overall operations. This review consisted of a series of 14 analyses that allowed the Policy Committee to obtain a holistic understanding of the District by answering questions such as:

- Is the SWMD adequately serving all waste-generating sectors?
- Is the SWMD recovering high volume wastes such as yard trimmings and cardboard?
- How well is the SWMD's recycling infrastructure being used, and how well is it performing?
- What is the District's financial situation and ability to fund programs?

Using what it learned, the policy committee drew conclusions about the SWMD's abilities, strengths and weaknesses, operations, existing programs and services, outstanding needs, available resources, etc. The policy committee then compiled a list of actions the SWMD could take, programs the SWMD could implement, or other things the SWMD could do to address its conclusions. The policy committee used that list to make decisions about the programs and services that will be available in the SWMD during the upcoming planning period.

After deciding on programs and services, the policy committee projected the quantities of recyclable materials that would be collected through those programs and services. This in turn allowed the policy committee to project its waste reduction and recycling rates for both the residential/commercial sector and the industrial sector (see appendix E for the residential/commercial sector and Appendix F for the industrial sector).

A. Solid Waste Management District's Priorities

Priority areas to focus efforts in the 2024 Plan include:

Priority Program	Priority Area
Environmental Education	Teaching students, the importance of recycling in their younger years, they learn responsibility, to act, and to share their knowledge with others in their community.
Digital Marketing Campaign	Campaign targeting residents using social media platforms

The District diverted 18% in the residential/commercial sector in 2020 and from 2016 to 2019, historically hovered at 19% diversion. This Plan Update analyzed which materials are being landfill, by applying national waste composition data. From the analysis, the District is able to estimate a diversion capture rate of about 43% for paper (includes cardboard) and 13% for organics. Not calculated is the diversion capture rate for plastics, but the District believes that plastics capture rate is low as a result of accepting only plastic bottles and jugs as well as the inconsistency for plastic collection.

One area to help increase capture rates of materials is alignment and focus on education and outreach. Education and outreach would help the District to better promote programs and encourage participation in the programs.

To maintain effectiveness and growth in the programs the District identified areas to modify or enhance the current programs. The priority areas to focus future efforts for the 2024 plan are as follows:

The following section defines the major programs and services the District will have available during the planning period. See Appendix I for the complete list of programs and descriptions.

B. Program Descriptions

This section briefly describes major programs and services available during the planning period. Appendix I contains complete descriptions.

1. Residential Recycling Programs

Curbside Recycling

The District had 2 non-subscription and 1 subscription curbside programs.

Table 5-1. Curbside Recycling Services

ID#	Name of Curbside Service/Community Served	Service Provider	When Service Was/Will be Available
NSC1	New London Village	Gateway – Cardboard Milliron - Metal	Ongoing
NSC2	Norwalk City	City Sanitation Department	Ongoing

NS = Non-subscription, S = Subscription

The Village of New London's and the City of Norwalk's Sanitation Departments provide non-subscription curbside recycling to residents in the village and township. New London Village serviced 867 households in 2020. Village customers, cardboard, newspaper, aluminum cans, and steel cans are accepted. The Village used to accept glass and plastic but was unable to continue including the materials due to cost and staffing limitations. This community was serviced by Gateway (cardboard collection) and Milliron (metal collection). Recyclables collected are glass, aluminum cans, plastics 1-7, steel cans, mixed paper, and cardboard

Target for Next 3 Years: The District anticipates the Village of New London will continue this program through the planning period.

Target for Next 3 Years: The District anticipates the City of Norwalk will continue this program through the planning period.

ID#	Name of Curbside Service/Community Served	Service Provider	When Service Was/Will be Available
SC1	Village of Wakeman	Republic	Ongoing

The District had one subscription service in the reference year. Republic Services offers subscription curbside recycling in the Village. Recyclables collected are glass, aluminum cans, plastics 1-7, steel cans, mixed paper, and cardboard. Recycling data for the Village is not reported. Wakeman Village serviced 225 households.

Target for Next 3 Years: The District anticipates the Village of Wakeman's program will continue through the planning period.

Drop-off Recycling

ID	Name	Service Provider	When Service Was/Will be Available
FTU1	Norwalk City, Huron County Administration Building	District	Ongoing
FTU2	Norwalk City, Dog Warden	District	Ongoing
FTU3	Willard City, Huron County Transfer Facility	District	Ongoing

Recyclables collected paper, cardboard, and cans. Materials are collected in a single commingled stream for FTU2 and FTU3 while FTU1 is multi stream. Access is 24/7. Tonnages recovered are included in the curbside totals and not separately tracked. This

drop-off is provided by the District and their private hauler. The intent is availability for their households and businesses only.

Target for Next 3 Years: Continue through the planning period.

ID	Name	Service Provider	When Service Was/Will be Available
PTU1	Willard City - Waste Water Treatment Plant	District	Ongoing
PTU2	Willard City - New Haven Township Hall	District	Ongoing
PTU3	Willard City - Norwich Township Hall	District	Ongoing
PTU4	Willard City - Richmond Township Hall	District	Ongoing

Recyclables collected plastic, glass, paper, cardboard, aluminum, and steel cans. Materials are collected in a single commingled stream. Access is available on a part-time basis. PTU1 is open Monday through Saturday while the remaining are only open for one Saturday a month. PTU1 is multi stream while the others are single stream commingled collection. Tonnages recovered are included in the curbside totals and not separately tracked. This drop-off is provided by the District and their private hauler. The intent is availability for their households and businesses only.

Target for Next 3 Years: Continue through the planning period.

ID	Name	Service Provider	When Service Was/Will be Available
FTR1	Greenwich Village – Admin Building	District	Ongoing
FTR3	New London Village Hall/ Water Plant	District	Ongoing

The District provided and serviced two full time rural drop off locations in the reference year. FTR1 and FTR3 had two containers on site that collected paper, cardboard, and cans. FTR2 was discontinued before 2020 but and is not identified in the above table. Recyclables collected are cardboard, mixed paper, aluminum, and steel cans. FTR1 is single stream and FTR3 is Multistream and only accepts paper.

Target for Next 3 Years: Continue through the planning period.

ID	Name	Service Provider	When Service Was/Will be Available
PTR1	Bellevue – Lyme Township Hall	District	Ongoing
PTR2	Collins – Hartland Township Hall	District	Ongoing
PTR3	Norwalk Township – Norwalk Township Hall	District	Ongoing

PTR4	Lyme Township	District	Ongoing
PTR5	Monroeville – Ridgefield Township Hall	District	Ongoing
PTR6	Norwalk City – Bronson Township Building	District	Ongoing
PTR7	Wakeman Township/Village – Wakeman Village Hall	District	Ongoing

The District provided and serviced six part time rural drop off locations in the reference year. The city of Norwalk was considering adding a seventh drop off location at the Norwalk City Hall, however this never came to fruition. The locations above had various hours of operation. Most locations were open one day a month, with each location being staggered from the others apart from PTR4 which was open for two days every month. The only location collecting single stream is PTR1. Recyclables collected are aluminum cans, steel cans, mixed paper, cardboard.

Target for Next 3 Years: Continue through the planning period.

Other Residential Recycling Programs

Name	Description
Curbside Recycling Technical Assistance	The District will provide technical assistance to cities, villages, or townships that express interest in implementing a curbside recycling program. Technical assistance to political subdivisions may include supporting requests for proposals from haulers, attending public meetings, assisting with consortium agendas, education assistance, and more.

Name	Description
Drop-off Location Expansion	Additional drop-off sites may be needed based on identification of underserved areas of the County. The District will begin discussions with communities to determine if a proposed new drop-off site development is feasible. If the District and community agree and an appropriate site is identified, the District will implement the drop-off site. In 2020, the District reached out to communities offering mini grants, but there was no interest to expand the drop-off program. In 2021, with limited funding this program had no activity.

Name	Description
Drop-off Initiative Program Consistency	The District's drop-off locations are not consistent across each location as to the materials accepted. The District was looking to bring more consistency to the materials accepted at sites where limited materials are accepted so all sites will accept the same materials. Materials accepted will include cardboard, newspaper, mixed paper, plastic (#1 and #2), paper, cardboard, aluminum cans and tin/steel cans.

Commercial/Institutional Sector Reduction and Recycling Programs

Name	Description
Waste Assessments	The District will identify urban areas that do not host a drop-off recycling site and provide technical assistance for improving access for residents that do not have curbside recycling.

Name	Description
School Drop-Off	Limited material drop-offs were available at New London High School and Western Reserve High School. Limited material drop-offs describe recycling sites that accept less than the required number of materials to be counted toward the goal of providing recycling opportunities to at least 80% of the community. New London High School collected mixed paper and metal cans; Western Reserve High School collected paper and cardboard.

Industrial Sector Reduction and Recycling Programs

Name	Description
Waste Assessments	The District offers waste audits and assessments upon request to industrial businesses for no charge. Following an audit or assessment, the District identifies opportunities for maximizing waste diversion and discusses customized strategies for implementing or expanding recycling activities. However, in the reference year there were no requests made to the District.

Restricted/Difficult to Manage Wastes

Name	Description
Yard Waste Management	In 2020, there were four registered compost facilities used. All four of the sites were Class IV facilities. The City of Norwalk and the Village of Wakeman bother operate yard waste collection services.

Name	Description
Household Hazardous Waste Collection Program	The District annually evaluates whether opportunities for partnerships may allow the District to offer household hazardous waste (HHW) collection events. In 2020, the District was unable to host an HHW collection due to budgetary constraints.

Name	Description
Scrap Tire Management	Bi-annual scrap tire collection events occur in odd-numbered years when grant funding is available. The District applies for grants to fund special collection events. Grant funding was last received in 2017 and held at the Huron County Fairgrounds to collect scrap tires. There were no collection events hosted by the District in 2020.

Name	Description
Electronic Recycling Management	The District planned to evaluate options for collecting source separated electronic waste at the transfer station in 2018. The District did not identify an R2 licensed and certified processor that is cost effective, to implement a program. If the District finds this program can occur without substantial costs, then the District will consider implementing it. The District refers residents to businesses located within the County.

Name	Description
Battery Management	A permanent collection of lead-acid batteries exists at the transfer facility, available year-round at no charge. A total of 1.13 tons of LABs were collected at the transfer station in 2020. The Battery Recycling Program maintains and distributes a list of lead-acid battery recyclers and information for cell phone and rechargeable battery outlets.

Name	Description
Appliance Management	White goods are collected year-round at the transfer station. Most appliances are accepted for no charge. Appliances containing Freon such as refrigerators, freezers, and dehumidifiers are accepted for a fee of $20.00 per item.

Name	Description
Used Oil Recycling Program	The Used Oil recycling Program provides a list of locations that accept used oil for recycling in brochures. The District maintains this list of locations updating annually

Enforcement and Cleanup

Name	Description
Litter and Community Cleanup	Some communities host their own community clean-up days with the support of the District. The District provides gloves, vests, and supplies to volunteer clean-up groups.

Funding/Grants

Name	Description
Recycling Incentive Grant	The District offered a Recycling Incentive Grant that provided financial assistance to the city of Norwalk to aid with the curbside recycling program. This program was discontinued in 2021.

Name	Description
Community Grant	To offer recycling expansion to other communities the District offered financial assistance to all political subdivisions. A grant manual was created in late 2018 and early 2019 to administer the grant program. Funding decreases have halted this program. This program is not budgeted for the planning period.

Data Collection

Name	Description
Data Collection Efforts	The District's Survey Strategy is used to assess commercial and industrial recycling levels, support

	District planning efforts, and effectively focus education efforts.

District Facilities

Name	Description
Huron County Transfer Facility and Landfill	The Huron County Commissioners own and operate the Huron County Transfer Facility. The Huron County Transfer Facility is the designated facility. The Transfer Facility also holds a Class IV composting registration.

Name	Description
Punch Card System	Many townships in Huron County stopped providing curbside waste and recycling collection. To assist residents of these townships, the District implemented an alternative program by installing a central drop box for waste disposal and recycling at the transfer station. The system is accounted for through punch cards which are provided by the participating communities

C. Waste Reduction and Recycling Rates

1. Residential/Commercial Recycling in the District

The District is projected to divert 16% in the first year of the planning period. To reach Ohio EPA's 25% goal, the District needs to increase diversion. The District is planning education efforts over this next planning period that should directly impact diversion rates. However, education efforts are difficult to measure so the modeled projections are conservative.

Table 5-1. Residential/Commercial Waste Reduction and Recycling Rate

Year	Projected Tons Collected	Residential/ Commercial WRR[1]
2024	8,813	16%
2025	8,816	16%
2026	8,823	16%
2027	8,831	16%
2028	8,828	15%
2029	8,826	15%

[1]WRR means waste reduction and recycling rate
Source:

Appendix K, Table K-1

Waste reduction and recycling in the residential/commercial sector is expected to hold flat during the first six years of the planning period.

2. Industrial Recycling in the District

Table 5-2. Industrial Waste Reduction and Recycling Rate

Year	Projected Tons Collected	Industrial WRR[1]
2024	46,687	86%
2025	46,421	86%
2026	46,156	86%
2027	45,893	86%
2028	45,632	86%
2029	45,372	86%

The District projects a slight decline in industrial sector diversion because tonnage was projected based on the average Projected Change in Employment Percent 2018-2028 using Ohio Job Outlook, which is expected to decline.

CHAPTER 6. BUDGET

Ohio Revised Code Section 3734.53(B) requires a solid waste management plan to present a budget. This budget accounts for how the SWMD will obtain money to pay for operating the SWMD and how the SWMD will spend that money. For revenue, the solid waste management plan identifies the sources of funding the SWMD will use to implement its approved solid waste management plan. The plan also provides estimates of how much revenue the SWMD expects to receive from each source. For expenses, the solid waste management plan identifies the programs the SWMD intends to fund during the planning period and estimates how much the SWMD will spend on each program. The plan must also demonstrate that planned expenses will be made in accordance with ten allowable uses that are prescribed in ORC Section 3734.57(G).

Ultimately, the solid waste management plan must demonstrate that the SWMD will have adequate money to implement the approved solid waste management plan. The plan does this by providing annual projections for revenues, expenses and cash balances.

If projections show that the SWMD will not have enough money to pay for all planned expenses or if the SWMD has reason to believe that uncertain circumstances could change its future financial position, then the plan must demonstrate how the SWMD will balance its budget. This can be done by increasing revenues, decreasing expenses, or some combination of both.

This chapter of the solid waste management plan provides an overview of the SWMD's budget. Detailed information about the budget is provided in Appendix O.

A. Overview of the District's Budget

During the 2020 reference year, the District's overall revenue was $210,017.46. This is projected to increase to roughly $225,000 in 2024. The District projects to receive an annual average of roughly $235,000 over the first five years of the planning period. The District is primarily funded through generation fees and does not anticipate this source of revenue will change throughout the planning period.

Generation fee revenues are expected to increase throughout the planning period. Estimates were projected using the flat generation fee multiplied by the projected disposal totals for the District from Appendix D. The generation fee is expected to remain at $4.50 through 2031 where it is expected to increase to $5.50. The projected increase in the generation fee will not be approved as a part of this 2024 Plan Update and the associated ratification process. Table 6-1 below presents the District's projected revenues and expenses through the first six years of the planning period.

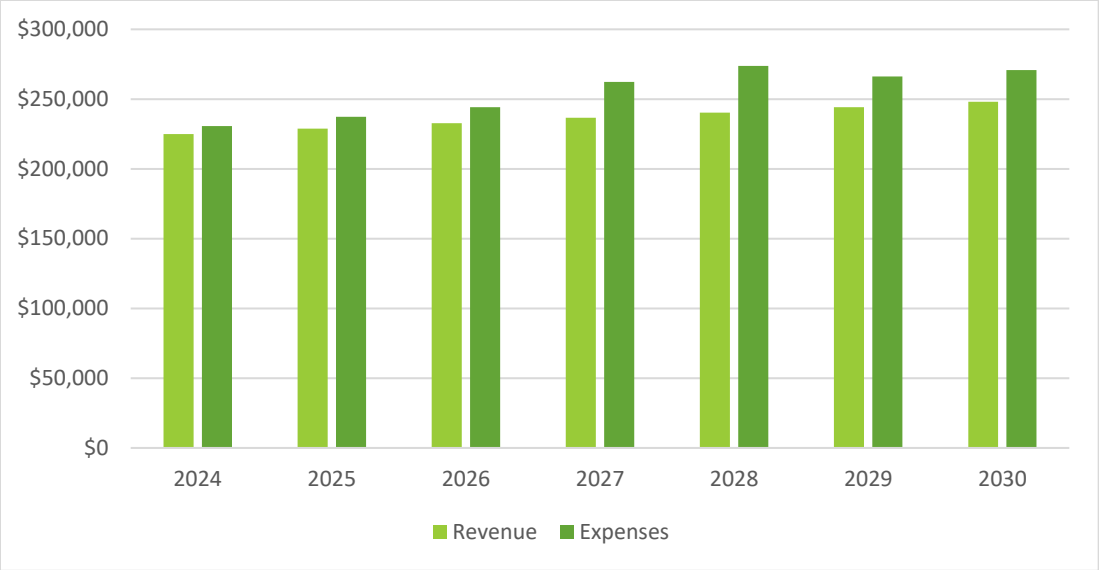


Figure 6-1 Projected Revenues and Expenses

B. Revenue

Overview of How Solid Waste Management Districts Earn Revenue

There are a number of mechanisms SWMDs can use to raise the revenue necessary to finance their solid waste management plans. Two of the most commonly used mechanisms are disposal fees and generation fees.

Before a SWMD can collect a generation or disposal fee it must first obtain approval from local communities through a ratification process. Ratification allows communities in the SWMD to vote on whether they support levying the proposed fee.

Disposal Fees (See Ohio Revised Code Section 3734.57(B))

Disposal fees are collected on each ton of solid waste that is disposed at landfills in the levying SWMD. There are three components, or tiers, to the fee. The tiers correspond to where waste came from – in-district, out-of-district, and out-of-state. In-district waste is solid waste generated by counties within the SWMD and disposed at landfills in that SWMD. Out-of-district waste is solid waste generated in Ohio counties that are not part of the SWMD and disposed at landfills in the SWMD. Out-of-state waste is solid waste generated in other states and disposed at landfills in the SWMD.

Ohio's law prescribes the following limits on disposal fees:

- The in-district fee must be at least $1.00 and no more than $2.00;
- The out-of-district fee must be at least $2.00 and no more than $4.00; and
- The out-of-state fee must be equal to the in-district fee.

Generation Fees (see Ohio Revised Code Section 3734.573)

Generation Fees are collected on each ton of solid waste that is generated within the levying SWMD and accepted at either a transfer facility or landfill located in Ohio. The fee is collected at the first facility that accepts the SWMD's waste. There are no minimum or maximum limits on the per ton amount for generation fees.

Rates and Charges (see Ohio Revised Code Section 343.08)

The Board of Directors can collect money for a SWMD through what are called rates and charges. The Board can require anyone that receives solid waste services from the SWMD to pay for those services.

Contracts (see Ohio Revised Code Sections 343.02 and 343.03)

The Board of Directors can enter into contracts with owners/operators of solid waste facilities or transporters of solid waste to collect generation or disposal fees on behalf of a SWMD.

Other Sources of Revenue

There are a variety of other sources that SWMDs can use to earn revenue. Some of these sources include:

- Revenue from the sale of recyclable materials;
- User fees (such as fees charged to participate in scrap tire and appliance collections);
- County contributions (such as from the general revenue fund or revenues from publicly-operated solid waste facilities (i.e., landfills, transfer facilities));
- Interest earned on cash balances;
- Grants;
- Debt; and
- Bonds.

The following summarizes the actual funding sources for the District:

1. Disposal Fees

The District does not have active landfills within its boundaries and does not plan to have any operating landfills inside its boundaries within the planning

2. Generation Fees

The District has a generation fee of $4.50 per ton of material generated within the District's boundaries and accepted at a transfer facility or landfill in the State of Ohio. The District collects the fee at the first facility to accept the waste and has no minimum or maximum limits on the per ton amount for generation fees. The District expects to hold the current fee price until 2031 when it is expected to increase to $5.50.

3. Designation Fees

In accordance with Ohio Revised Code 343.014, a solid waste management district may adopt designation fees to assure adequate financing to implement the approved solid waste plan. The SWMD does not currently have designation fees.

4. Other Sources of Revenue

Other sources of revenue include:

- **Grants** – The District received two grants from 2016 to 2021. The first came in 2018 for $7,000 from the Ohio EPA. The second grant received was in 2021 for $50,000.

  Grants obtained by the District are competitive and therefore not a guaranteed source of revenue. Potential revenue from future grants has been excluded from the projections in Table O-5.

- **Recycling Revenue** – The District receives fees for services to provide drop-off locations in the townships. The District peaked in 2018 at roughly $19,000 from recycling revenue and observed its low of $7,000 in 2020. In terms of revenue projections, the District will hold the historical five-year average of $12,500 annually throughout the planning period

- **Legal Payment** – During 2018, the District received a legal payment of $30,000 dollars. Revenue from this source is not stable year over year and there are no projections to receive any revenue from this source over the planning period.

- **User Fee** – The District received two user fees totaling $4,200 in 2020. There were no other user fees. The District does not expect user fees to be a constant source of revenue and therefore has no included it in future projections.

- **Miscellaneous Revenue** – Miscellaneous revenue resulting from refunds, rebates, vehicle sales, etc. The revenue from this source is not stable from year to year and is not included in future projections.

5. Summary of Revenue

The following table presents the District's total revenue by source for the 2020 reference year and the first six years of the planning period.

Table 6-1 Summary of Revenue

Year	Disposal Fees	Generation Fees	Designation Fees	Other Revenue	Total Revenue
2020	**$ -**	**$195,897**	**$ -**	***$ 14,120***	**$210,017**
2024	$ -	$211,716	$ -	$13,178	$224,894
2025	$ -	$215,593	$ -	$13,178	$228,771
2026	$ -	$219,471	$ -	$13,178	$232,649
2027	$ -	$223,350	$ -	$13,178	$236,528
2028	$ -	$227,229	$ -	$13,178	$240,407
2029	$ -	$231,110	$ -	$13,178	$244,288

Source(s) of Information:
Year 2020 sourced from Quarterly Fee Reports
Planning period years sourced from Appendix O
Sample Calculations:
Total Revenue = Generation Fes + Other Revenue

C. Expenses

Overview of How Solid Waste Management Districts Spend Money

Ohio's law authorizes SWMDs to spend revenue on 10 specified purposes (often referred to as the 10 allowable uses). All of the uses are directly related to managing solid waste or for dealing with the effects of hosting a solid waste facility. The 10 uses are as follows:

1. Preparing, monitoring, and reviewing implementation of a solid waste management plan.
2. Implementing the approved solid waste management plan.
3. Financial assistance to approved boards of health to enforce Ohio's solid waste laws and regulations.
4. Financial assistance to counties for the added costs of hosting a solid waste facility.
5. Sampling public or private wells on properties adjacent to a solid waste facility.

6. Inspecting solid wastes generated outside of Ohio and disposed within the SWMD.
7. Financial assistance to boards of health for enforcing open burning and open dumping laws, and to law enforcement agencies for enforcing anti-littering laws and ordinances.
8. Financial assistance to approved boards of health for operator certification training.
9. Financial assistance to municipal corporations and townships for the added costs of hosting a solid waste facility that is not a landfill.
10. Financial assistance to communities adjacent to and affected by a publicly-owned landfill when those communities are not located within the SWMD or do not host the landfill.

In most cases, the majority of a SWMD's budget is used to implement the approved solid waste management plan (allowable use 2). There are many types of expenses that a solid waste management district incurs to implement a solid waste management plan.

- Salaries and benefits;
- Purchasing and operating equipment (such as collection vehicles and drop-off containers);
- Operating facilities (such as recycling centers, solid waste transfer facilities, and composting facilities);
- Offering collection programs (such as for yard trimmings, HHW and scrap tires);
- Providing outreach and education;
- Providing services (such as curbside recycling services); and
- Paying for community clean-up programs.

Table 6-2 presents a summary of expenses for the 2020 reference year and for the first 6 years of the planning period (2024 to 2029) broken into specific expense categories.

Table 6-2 Summary of Expenses

Expense Category	Year						
	Reference	Planning Period					
	2020	2024	2025	2026	2027	2028	2029
Plan Monitoring/Preparation	$0	$4,000	$4,000	$4,000	$15,000	$19,000	$4,000
District Administration	$127,496	$131,238	$135,175	$139,231	$143,407	$147,710	$152,141
Recycling Collection	$80,000	$91,488	$94,233	$97,060	$99,971	$102,971	$106,060
Education/Awareness	$0	$ 4,000	$ 4,000	$ 4,000	$ 4,000	$ 4,000	$ 4,000
Other	$116,280	$0	$0	$0	$0	$0	$0
Total Expenses	$323,776	$230,726	$237,408	$244,290	$262,379	$273,680	$266,201

Source(s) of Information:
Year 2020 sourced from Quarterly Fee Reports
Planning period years sourced from Appendix O
Sample Calculations:
Total Expenses = sum of expenses category

D. Budget Summary

Table 6-3 presents a summary of the budget for the 2020 reference year and the first six years of the planning period (2024 to 2029). The summary includes revenue, expenditures, net balance, and year-end fund balance. Revenue is projected to increase from $210,000 in 2020 to roughly $245,000 in 2029. Expenses are expected to decrease from $321,000 in 2020 to $267,000 in 2029. The District's ending balance during the first six years of the planning period is then projected to decrease by roughly $101,000 by 2029.

Table 6-3 Budget Summary

Year	Revenue	Expenses	Net Difference	Ending Balance
Reference Year				
2020	**$210,017**	***$321,349***	**-$111,332**	**$102,391**
Planning Period				
2024	$224,894	$230,726	($5,832)	$137,256
2025	$228,771	$237,408	($8,637)	$128,618
2026	$232,649	$244,290	($11,642)	$116,977
2027	$236,528	$262,379	($25,851)	$91,125
2028	$240,407	$273,680	($33,273)	$57,852
2029	$244,288	$266,201	($21,913)	$35,940

Source(s) of Information:
Year 2020 sourced from Quarterly Fee Reports
Planning period years sourced from Appendix O
Sample Calculations:
Net Difference = Revenue – Expenses
Ending Balance = Net Difference + Previous Year Ending Balance

APPENDIX A

REFERENCE YEAR, PLANNING PERIOD, GOAL STATEMENT, MATERIAL CHANGE IN CIRCUMSTANCES, EXPLANATIONS OF DIFFERENCES IN DATA

Appendix A Miscellaneous Information

Appendix A establishes the reference year used for this plan update, planning period, goal statement, material change in circumstances and explanations of differences in data.

A. Reference Year

The reference year for this solid waste management plan is **2020**.

B. Planning Period (First and Last Years)

The planning period for this solid waste management plan is: **2024 to 2038.**

C. Goal Statement

The SWMD will achieve the following Goal(s): **Goal 1**

D. Explanations of Differences Between Data Previously Reported and Data Used in the Solid Waste Management Plan

1. **Differences in quantities of materials recovered between the annual district report and the solid waste management plan**

   See explanation provided in Appendix E.

2. **Differences in financial information reported in quarterly fee reports and the financial data used in the solid waste management plan**

   See explanation provided in Appendix O.

E. Material Change in Circumstances/Contingencies

Ohio law [ORC Section 3734.56(D)] requires the District's *Solid Waste Management Plan* to be updated when the Huron County Solid Waste Management District (District) Board of Directors (Board) determines that there has been a material change in circumstances from the circumstances addressed in the approved *Plan.* If a plan update is required due to a material change in circumstances, the plan update must address those portions of the plan that need to be modified due to the material change in circumstances.

In the event that a new or undesignated solid waste transfer, disposal, recycling or resource recovery facility is subsequently designated by the Board, or a new or undesignated facility is granted a waiver which permits the undesignated facility to accept solid waste generated within the District, and such designation or waiver is documented in a designation or waiver agreement, the Board may not determine

that a material change in circumstances has occurred. The Board, as part of the consideration of its assessment of a new or undesignated facility on the Plan, may consider whether to change its tiered disposal fees, establish a generation fee or modify its contract fee.

In determining whether a material change in circumstances has occurred, the Board will consider the following:

a. An assessment of changes in waste generation;
b. Capacity availability for disposal, transfer, composting, and management of restricted waste streams;
c. Strategies for waste reduction and/or recycling;
d. Substantial changes in the availability of waste reduction and recycling opportunities available to District residents;
e. The availability of revenues for plan implementation;
f. Procedures to be followed for plan implementation;
g. Timetable for implementation of programs and/or activities;
h. Facility designations and the flow of waste (the addition or removal of a facility from the designated list is not a material change in circumstances); and
i. Any other factor that the Board considers relevant.

The Determination Criteria will be evaluated on the basis of the District Policy Committee's annual review of the approved Plan, and/or information obtained through the District Staff's monitoring program. The staff monitoring program includes the following:

a. Quarterly analysis of District revenues;
b. Analysis of information acquired by District Staff for preparation of the Annual District Report;
c. Information acquired by District Staff through follow-up investigations of citizen complaints which indicate the existence of deviations from or noncompliance with the District Plan; and
d. Analysis of information voluntarily provided to the District Staff by state or local officials and employees, or owners and operators of solid waste collection, disposal, transfer, recycling activities, or resource recovery facilities, which indicate the existence of major deviations from and/or noncompliance with the District's Plan.

The Policy Committee or the District's Staff will immediately notify the Board of any reliable information that suggests that a change in circumstances has occurred that warrants the Board's consideration of whether a material change in circumstances has occurred.

Within 10 days from receipt of notification from the Policy Committee or the District Staff that there may be a material change in circumstances, the District's Board of

Directors will request the District Staff to prepare a report which discusses the events or conditions that have changed as identified in the notice to the Board and apply the criteria listed in paragraph 1, above. The District Staff will prepare the report and submit it to the Board of Directors within 30 days of the Board's request. Within 10 days after the receipt of the District Staff's report, the Board will determine whether additional information is necessary for the Board to determine whether a material change has occurred. If the Board determines that additional information is required, the District Staff will revise its report to include such additional information and submit its revised report within 20 days from the Board's request for additional information.

Within 60 days after the Board's receipt of the District Staff's revised and final report, the Board will make a determination of whether the changed circumstances are material pursuant to the criteria listed in paragraph 1, above. The Board may obtain such additional information from sources other than the District Staff as the Board deems necessary and appropriate to assist the Board in its determination of whether a material change in circumstances has occurred.

Upon the Board's determination that a material change in circumstances has occurred, the Board shall notify the District Policy Committee and the Director of the Ohio Environmental Protection Agency, in writing, within 10 days of the Board's determination. The Board's notice to the Policy Committee shall request the District Policy Committee to prepare a draft amended solid waste plan, pursuant to ORC 3734.56 (D), that addresses those portions of the District's Plan that the Board has determined may be affected, directly or indirectly, by the material change in circumstances.

APPENDIX B

RECYCLING INFRASTRUCTURE INVENTORY

Appendix B. Recycling Infrastructure Inventory

This appendix provides a review of the recycling infrastructure available in the reference year (2020), which includes curbside recycling programs, recycling drop-off sites, collection service providers, and compost facilities/activities.

A. Curbside Recycling Services, Drop-off Recycling Locations, and Mixed Solid Waste Materials Recovery Facilities

1. Curbside Recycling Services

Table B-1a. Inventory of Non-Subscription Curbside Recycling Services Available in the Reference Year

ID #	Name of Curbside Service	Service Provider	County	How Service is Provided	Collection Frequency	Materials Collected	Type of Collection	PAYT (Y/N)	Weight of Materials Collected from SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)
NCS1	New London Village	New London Village	Huron	Village Department	Weekly	AC, ONP, OCC, SC, Mag, OffP, MxP,	Single stream manual	N	Not Reported	Y
NCS2	Norwalk City	Norwalk City	Huron	City Department	Weekly	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP,	Single stream manual	Y	697	Y
Total									697	

Materials Collected: AC = aluminum containers, GL = glass containers, PL = plastic containers, ONP = newspaper, OCC = cardboard, SC = steel containers, Mag = magazines, OffP = office paper, MxP = mixed paper, Oth = other
Source: 2020 Annual District Report Implementation Schedule

Two non-subscription curbside recycling programs operated in the reference year. Both use a single stream manual method to collect. Norwalk is pay as you throw (PAYT), and New London has no PAYT requirements. Both Norwalk and New London haul their recyclables to the Huron County Transfer Station where they are sent for further processing.

Table B-1b: Inventory of Subscription Curbside Recycling Services Available in the Reference Year

ID #	Name of Curbside Service	County	How Service is Provided	Collection Frequency	Materials Collected	Type of Collection	PAYT (Y/N)	Weight of Materials Collected from SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)
SC1	Wakeman Village	Huron	Contract with Hauler	Bi-Weekly	AC, GL, PL, ONP, OCC, SC, Mag, OffP, MxP,	Single stream automated	N	Not Reported	Y
Total								0	

Materials Collected: AC = aluminum containers, GL = glass containers, PL = plastic containers, ONP = newspaper, OCC = cardboard, SC = steel containers, Mag = magazines, OffP = office paper, MxP = mixed paper, Oth = other

Source: 2020 Annual District Report Implementation Schedule

One subscription curbside recycling program operated in the reference year. This program uses a single stream automated method to collect and is not pay as you throw (PAYT).

2. Drop-off Recycling Locations

Table B-2a. Inventory of Full-Time, Urban Drop-Off Sites Available in Reference Year

ID#	Name of Drop-off Site	Service Provider	County	How Service is Provided	Days and Hours Available to the Public	Materials Collected	Drop-off Meets All Minimum Standards (Y/N)	Weight of Materials Collected from the SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)
FTU1	Norwalk City, Huron County Administration Building	SWMD	Huron	Multi stream	24/7	AC, ONP, OCC, SC, Mag, OffP, MxP	Y	Included in Total	Y
FTU2	Norwalk City, Dog Warden	SWMD	Huron	Single stream	24/7	AC, ONP, OCC, SC, Mag, OffP, MxP	Y	Included in Total	Y
FTU3	Willard City, Huron County Transfer Facility	SWMD	Huron	Single stream	M-F 7am-4pm Sat 7am-12pm	AC, ONP, OCC, SC, Mag, OffP, MxP	Y	Included in Total	Y
Total								977	

Materials Collected: AC = aluminum containers, GL = glass containers, PL = plastic containers, ONP = newspaper, OCC = cardboard, SC = steel containers, Mag = magazines, OffP = office paper, MxP = mixed paper, Oth = other
Source: 2020 Annual District Report Implementation Schedule

Three full-time urban drop-off recycling locations were available to residents of the District in the reference year. The service is provided by a multi stream system that requires participants to sort multiple types of recyclables before collection by the District. The District is listed as the service provider, but collection service is actually provided by Huron County employees at no cost to the District.

Table B-2b. Inventory of Part-Time, Urban Drop-Off Sites Available in Reference Year

ID#	Name of Drop-off Site	Service Provider	County	How Service is Provided	Days and Hours Available to the Public	Materials Collected	Drop-off Meets All Minimum Standards (Y/N)	Weight of Materials Collected from the SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)
PTU1	Willard Wastewater Treatment	SWMD	Huron	Multi stream	Mon-Sat 8am-5pm	AC, ONP, OCC, SC, Mag, OffP,	Y	Included in Total in Table B-2a	Y

ID#	Name of Drop-off Site	Service Provider	County	How Service is Provided	Days and Hours Available to the Public	Materials Collected	Drop-off Meets All Minimum Standards (Y/N)	Weight of Materials Collected from the SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)
						MxP, PL#1 and #2			
PTU2	Willard City New Haven Township Hall	SWMD	Huron	Single stream	1st Sat even months	AC, ONP, OCC, SC, Mag, OffP, MxP, PL #1 and #2	Y	Included in Total in Table B-2a	Y
PTU3	Willard City, Norwich Township	SWMD	Huron	Single stream	1st Sat odd months	AC, ONP, OCC, SC, Mag, OffP, MxP	Y	Included in Total in Table B-2a	Y
PTU4	Richmond Township Hall	SWMD	Huron	Single stream	2nd Saturday odd months	AC, ONP, OCC, SC, Mag, OffP, MxP, PL #1 and #2	Y	Included in Total in Table B-2a	Y
Total								0	

Materials Collected: AC = aluminum containers, GL = glass containers, PL = plastic containers, ONP = newspaper, OCC = cardboard, SC = steel containers, Mag = magazines, OffP = office paper, MxP = mixed paper, Oth = other
Source: 2020 Annual District Report Implementation Schedule

Four part-time urban drop-off recycling locations were available to residents of the District in the reference year. The times available for the part-time drop offs varies per location. One program collects materials in a multi stream system that requires participants to sort multiple types of recyclables before collection by the District. The other remaining programs collect in a single stream system that commingles all recyclables.

Table B-2c. Inventory of Full-Time, Rural Drop-Off Sites Available in Reference Year

ID#	Name of Drop-off Site	Service Provider	County	How Service is Provided	Days and Hours Available to the Public	Materials Collected	Drop-off Meets All Minimum Standards (Y/N)	Weight of Materials Collected from the SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)
FTR1	Greenwich Recycling Box (Downtown Greenwich)	SWMD	Huron	Single stream	24/7	AC, ONP, OCC, SC, Mag, OffP, MxP	Y	Included in Total in Table B-2a	Y
FTR2	Monroeville	SWMD	Huron	Multi stream	24/7	AC, ONP, OCC, SC, Mag, OffP, MxP	Y	Included in Total in Table B-2a	N

ID#	Name of Drop-off Site	Service Provider	County	How Service is Provided	Days and Hours Available to the Public	Materials Collected	Drop-off Meets All Minimum Standards (Y/N)	Weight of Materials Collected from the SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)
FTR3	New London, Village Garage	SWMD	Huron	Multi stream	M-F 7am-3:30pm	ONP, OCC, Mag, OffP, MxP	N	Included in Total in Table B-2a	Y
Total								0	

Materials Collected: AC = aluminum containers, GL = glass containers, PL = plastic containers, ONP = newspaper, OCC = cardboard, SC = steel containers, Mag = magazines, OffP = office paper, MxP = mixed paper, Oth = other
Source: 2020 Annual District Report Implementation Schedule

Three full-time rural drop off recycling locations were available to residents of the District in the reference year. One program collects in a single stream system that commingles all recyclables. Two programs collect materials in a multi stream system that requires participants to sort multiple types of recyclables before collection by the District.

Table B-2d. Inventory of Part-Time, Rural Drop-Off Sites Available in Reference Year

ID#	Name of Drop-off Site	Service Provider	County	How Service is Provided	Days and Hours Available to the Public	Materials Collected	Drop-off Meets All Minimum Standards (Y/N)	Weight of Materials Collected from the SWMD (tons)	Service will Continue Throughout Planning Period (Y/N)
PTR1	Hartland Township	SWMD	Huron	Single stream	1st Sat every month	AC, ONP, OCC, SC, Mag, OffP, MxP	Y	Included in Total in Table B-2a	Y
PTR2	Norwalk Township	SWMD	Huron	Multi stream	2nd Sat every months	AC, ONP, OCC, SC, Mag, OffP, MxP	Y	Included in Total in Table B-2a	Y
PTR3	Lyme Township	SWMD	Huron	Single stream	Last Sat every month	AC, ONP, OCC, SC, Mag, OffP, MxP	Y	Included in Total in Table B-2a	Y
PTR4	Ridgefield Township	SWMD	Huron	Single stream	Last Mon and Tues every month	AC, ONP, OCC, SC, Mag, OffP, MxP	Y	Included in Total in Table B-2a	Y
PTR5	Bronson Township Hall	SWMD	Huron	Single stream	3rd Sat even months	AC, ONP, OCC, SC, Mag, OffP, MxP	Y	Included in Total in Table B-2a	Y
PTR6	Wakeman Township Village Hall	SWMD	Huron	Single stream	2nd Sat every month 8am-11am CHANGED to 24/7	AC, ONP, OCC, SC, Mag, OffP, MxP	Y	Included in Total in Table B-2a	Y
Total								0	

Materials Collected: AC = aluminum containers, GL = glass containers, PL = plastic containers, ONP = newspaper, OCC = cardboard, SC = steel containers, Mag = magazines, OffP = office paper, MxP = mixed paper, Oth = other
Source: 2020 Annual District Report Implementation Schedule

Six part-time rural drop-off recycling locations were available to residents of the District in the reference year. The times available for drop-off varied, with most drop-off locations setting a specific day(s) of the week for drop-off lasting the entirety of the day. A few locations allotted three-hour increments on set days for drop-off.

One program collects materials in a multi stream system that requires participants to sort multiple types of recyclables before collection by the District. The other remaining programs collect in a single stream system that commingles all recyclables.

3. Mixed Municipal Solid Waste Material Recovery Facility

Table B-3. Mixed Municipal Solid Waste Material Recovery Facility

Name of Facility	Location	Communities Served	Types of Materials Recovered (1)	Weight of Materials Recovered (tons)	Waste Processed (tons)	Bypass Waste (tons)	Total Waste (tons)	Recovery Rate in Reference Year (percent)
None								0%
Total				**0**	**0**	**0**	**0**	**0%**

A mixed solid waste materials recovery facility (MRF) gives residents access to recycling opportunities by removing recyclables from trash for residents. In 2020, there were no mixed solid waste material recovery facilities in the District.

B. Curbside Recycling and Trash Collection Service Providers

Table B-4. Inventory of Curbside Recycling and Trash Collection Service Providers in the Reference Year

Name of Provider	Counties Served	Trash Collection Services				Curbside Recycling Services		
		PAYT (Y/N)	**Residential**	**Commercial**	**Industrial**	**Residential**	**Commercial**	**Industrial**
City of Norwalk	Huron	Y	X	X		X	X	
Village of New London	Huron	N	X	X		X	X	
Rumpke	Huron	N	X	X	X	X	X	X
Republic	Huron	N	X	X	X	X	X	X
Armatrout Sanitation	Huron	N						
Norwalk Waste	Huron	N		X	X		X	X

Source(s): 2020 Annual District Report
Notes: PAYT = Pay-As-You-Throw

There are a total of 6 haulers available in the District that give residential, commercial, and industrial sectors the opportunity to haul trash and recycling. The list of haulers was

obtained through District records and survey responses to the Annual District Report (ADR).

C. Composting Facilities

Table B-5. Inventory of Composting/Yard Trimmings Management Activities Available in the Reference Year

Facility Name	Compost Facility Classification	Publicly Accessible (Y/N)	Location	Food Waste (tons)	Yard Waste (tons)	Total
Greenwich Composting Facility	4	N	Court St, Greenwich, OH	0	87	87
Village of New London	4	Y	West Fir St, New London, OH	0	112	112
Sand Road Ent Inc	4	N	4352 Sand Road, Norwalk, OH	0	185	185
Corso's Perennials	4	N	4001 Bardshar Rd	0	62	62
Hauler/Grocer Food Waste Data	NA	NA	NA	80	0	80
Norwalk Compost Facility	Drop-off and Chipping	Y	Austin Shadle Road	DNR	DNR	DNR
Huron County Fair Grounds	3	Y	940 Fair Rd, Norwalk, OH 44857	0	0	0
Huron County Solid Waste Facility	4	N	2415 Townline Rd 131, W, Willard, OH 44890	0	0	0
Total				80	447	527

Source(s):
2020 Ohio EPA Compost Facility Report
Ohio EPA Registered Class I, Class III & Class IV Composting Facilities List. Note: A published date was not issued. List was reviewed on website January 2023.

Organic waste is a valuable organic material that has beneficial uses such as soil conditioners, erosion control, improved soil nutrient retention, etc. Table B-5 identifies the yard waste management facilities and activities which received yard waste and other organic waste during the reference year. This table includes the facilities and programs that managed food waste and yard waste. As shown in the table, most of the yard waste is managed at in-district compost facilities.

D. Other Food Waste and Yard Waste Management Programs

Table B-6. Inventory of Other Food and Yard Waste Management Activities Used in Reference Year

Facility or Activity Name	Activity Type	Location	Food Waste (tons)	Yard Waste (tons)
None				0
Total				0

There were no “other” food waste or yard waste programs reported in the District for the reference year.

E. Material Handling Facilities Used by the SWMD in the Reference Year

Table B-7. Inventory of Material Handling Facilities Used by the District in the Reference Year

Facility Name	County	State	Type of Facility	Weight of Material Accepted from SWMD (tons)
Richland County Recycling and Transfer Facility	Richland	Ohio	MRF	792
Total				792

Source(s): Ohio EPA 2020 Material Recovery Facility Report

As indicated in Table B-7 above, one facility reported receiving recyclable materials from The District in the reference year. This facility is located in Richland County and is owned by Rumpke.

APPENDIX C

POPULATION DATA

APPENDIX C. Population Data

A. Reference Year Population

Table C-1a. Reference Year Population Adjustments

	Huron
Before Adjustment	58,565
Additions	0
Subtractions	
Bellevue	3,512
Milan	350
Plymouth	873
After Adjustment	53,830

Source(s):
"2019 Population Estimates for Cities, Villages, and Townships" prepared by Ohio Development Services Agency, Office of Research
"Population and Households: 2020, 2010, and 2000" prepared by Ohio Development Services Agency, Office of Research

Table C-1b: Total Reference Year Population

Unadjusted Population	Adjusted Population
58,565	53,830

Reference year population is taken from Ohio Development Services Agency Office of Statistical Research (ODSA, OSR). OSR provided population numbers for 2020 based on the 2020 Census data by governmental unit. Note: Ohio law requires that the entire population of a municipality located in more than one solid waste management district be added to the solid waste management district containing the largest portion of the jurisdiction's population. The District has 3 communities that are located in more than one solid waste management District. These were the communities of Bellevue, Milan, and Plymouth and were subtracted since the majority population live in Sandusky, Erie, and Richland counties respectively.

B. Population Projections

Table C-2: Population Projections

Year	Huron	Total District
2020	53,830	53,830
2021	53,689	53,689
2022	53,548	53,548
2023	53,407	53,407
2024	53,266	53,266
2025	53,125	53,125

Year	Huron	Total District
2026	53,890	53,890
2027	53,708	53,708
2028	53,526	53,526
2029	53,344	53,344
2030	53,162	53,162
2031	52,990	52,990
2032	52,818	52,818
2033	52,646	52,646
2034	52,474	52,474
2035	52,302	52,302
2036	52,186	52,186
2037	52,070	52,070
2038	51,954	51,954

Source: Ohio Development Services Agency, "2010 to 2040 Projected Population for Ohio Counties - Summary 2010 to 2040 Projected," April 2018.
Sample Calculations:

Adjusted population in Huron 2020 = 53,830
Projected population in Huron 2030 = 53,162
Annual population change in Huron = (53,830-53,162)/53,830 = -0.12%

Population projections for the entire planning period are shown below in Table C-2. The reference year 2020 population represent the actual 2020 US Census for that year. The District populations calculated for 2025, 2030, 2035, and 2040 have been determined using projection estimates for those years from the Ohio Development Services Agency. Straight-line projections have been used to develop the population estimates for years between the five-year intervals listed above.

Population projections gauge future demand for services, but in projection calculations there are room for errors given the difficulty associated with forecasting. Table C-2 shows a slight decrease in the population throughout the planning period. The population is expected to decrease by 1.05% from 2020 through the fifth year of the planning period (year 2028) and decrease by 3.5% by the end of the planning period or 0.18% annually.

APPENDIX D

DISPOSAL DATA

Appendix D. Disposal Data

A. Reference Year Waste Disposed

Table D-1a. Waste Disposed in Reference Year – Publicly-Available Landfills (Direct Haul)

	Location		Waste Accepted from the SWMD			
Facility Name	County	State	Residential/ Commercial (tons)	Industrial (tons)	Excluded (tons)	Total (tons)
Crawford County Landfill	Crawford	OH		10	120	130
Erie County Landfill	Erie	OH	3,162	42	5,445	8,649
American Landfill, Inc	Stark	OH	0	7		7
Wood County Landfill	Wood	OH	1			1
Evergreen Recycling and Disposal	Wood	OH		6	3	8
Lorain County Landfill LLC	Lorain	OH	0	0	2	2
Sunny Farms Landfill LLC	Seneca	OH		2	5	7
Rumpke of Northern OH Inc Noble Road Landfill	Richland	OH	83	1	261	344
Port Clinton Landfill	Ottawa	OH	663	15	6	700
Total			3,910	83	5,841	9,849

Source(s)**:** Ohio Environmental Protection Agency, "2020 Ohio EPA Waste Flow Report"
Note: Excluded wastes are classified as slag, uncontaminated earth, non-toxic fly ash, spend non-toxic foundry sand and material from mining, construction, or demolition operations.

A wide variety of waste is disposed in municipal solid waste landfills and includes waste from households, businesses, institutions, and industrial activities. If permitted, asbestos construction and demolition debris, dewatered sludge, soil, and incinerated ash may also be disposed in landfills. Industrial waste includes excluded wastes.

The majority (88%) of the District's waste which was direct-hauled for disposal in the reference year was sent to the Erie County Sanitary Landfill (see Table D-1a). The Port Clinton Landfill, Noble Road Landfill, and Crawford County Landfill also accepted substantial amounts of the District's direct-hauled waste. These four landfills received more than 96% of the District's direct-hauled waste sent for disposal.

There was a total of 9 publicly available landfills the District used to dispose of waste. Waste flows to landfills either by direct haul or through a transfer facility. Directly hauled waste is disposed of in-state facilities.

Table D-1b. Reference Year Waste Disposed – Captive Landfills

	Location		Waste Accepted from the District		
Facility Name	County	State	Industrial (tons)	Excluded (tons)	Total (tons)
None					0
Total			0	0	0

Source(s): Ohio Environmental Protection Agency, "2020 Ohio EPA Waste Flow Report"

There were no captive landfills located within the District during the reference year. In addition, no captive landfills located outside the District were used to manage waste generated by the District.

Table D-1c. Total Waste Disposal in Landfills (Direct Haul)

Residential/Commercial (tons)	Industrial (tons)	Excluded (tons)	Total
3,925	83	5,841	9,849

Source(s): Ohio Environmental Protection Agency, "2020 Ohio EPA Waste Flow Report"
Note: Excluded wastes are classified as slag, uncontaminated earth, non-toxic fly ash, spend non-toxic foundry sand and material from mining, construction, or demolition operations.

In the reference year, a total of 9,849 tons of waste were directly hauled from the District. 40% of the direct hauled waste was from the residential/commercial sector and 59% was classified as excluded waste.

Table D-2. Reference Year Waste Transferred

	Location		Waste Received from the SWMD			
Facility Name	County	State	Residential/ Commercial (tons)	Industrial (tons)	Excluded (tons)	Total (tons)
Huron County Solid Waste Facility	Huron	OH	36,793	5,375	2	42,171
Rumpke Waste Inc Broadview Heights Transfer Facility	Cuyahoga	OH	1	0	0	1
Total			36,794	5,375	2	42,172

Source(s):
Ohio EPA "2020 Analytics Waste Flow Report"
Ohio EPA "2020 Facility Data Report"
Note: Excluded wastes are classified as slag, uncontaminated earth, non-toxic fly ash, spend non-toxic foundry sand and material from mining, construction, or demolition operations.

Transfer facilities are located where solid waste deliveries from collection companies and residents are consolidated, temporarily stored, and loaded for transport. The waste is then delivered to a processing facility or disposal site. In instances where waste is from a transfer facility to a landfill, the county of origin is not recorded at the landfill. This means a load of trash disposed in a landfill from a transfer facility could have waste

from other counties. As a result, it is difficult to track and record which landfill received a county's waste.

Transfer facilities process most of the District's waste sent for disposal (see Table D-2). The in-district Huron County Solid Waste Facility reported most of the tonnage received from The District (99%) followed by the out of district Rumpke Waste Broadview Heights Transfer Facility (less than 1%). Overall, over 42,000 tons of waste for disposal from Huron County was first sent to transfer stations in 2020 with a majority of the waste being from the residential/commercial sector.

Table D-3 Waste Incinerated/Burned for Energy Recovery in Reference Year

		Location		Waste Accepted from the SWMD			
Facility Name	Facility Type	County	State	Residential/ Commercial (tons)	Industrial (tons)	Excluded (tons)	Total (tons)
None				0	0	0	0
Total				0	0	0	0

Source(s)**:**
Ohio EPA "2020 Analytics Waste Flow Report"
Ohio EPA "2020 Facility Data Report"

Waste was not managed at incinerators during the reference year.

Table D-4. Reference Year Total Waste Disposed

	Residential/ Commercial (tons)	Industrial (tons)	Excluded (tons)	Total (tons)	% of Total Waste Disposed
Direct Hauled	3,925	83	5,841	9,849	19%
Transferred	36,794	5,375	2	42,171	81%
Incinerated	0	0	0	0	0%
Total	40,719	5,458	5,843	52,020	100%
Percent of Total	78%	10%	11%	100%	

Source(s)**:**
Ohio EPA "2020 Analytics Waste Flow Report"
Ohio EPA "2020 Facility Data Report"
Note: Excluded wastes are classified as slag, uncontaminated earth, non-toxic fly ash, spend non-toxic foundry sand and material from mining, construction, or demolition operations.

According to Ohio EPA Format 4.0, if excluded waste is 10% or less of total disposal in the reference year, then Districts are not required to account for excluded waste in the solid waste management plan. For the District, excluded waste accounts for 11% of the total disposal in 2020 and will be included in the solid waste management plan.

Approximately 19% of the total waste was direct hauled, meaning a disposal truck picked up waste from clients and directly hauled that waste to a landfill for disposal. The

remaining 81% of waste was sent to a transfer facility before reaching the landfill for disposal.

Roughly 78% of the District's waste was from the residential/commercial sector, 10% was from the industrial sector, and 11% was excluded waste.

B. Historical Waste Analysis

Table D-5. Historical Disposal Data

Year	Population	Residential/ Commercial Solid Waste		Industrial Solid Waste	Excluded Waste	Total Waste
		Rate (ppd)	Weight (tons)	Weight (tons)	Weight (tons)	Weight (tons)
2016	53,627	3.54	34,635	7,423	7,810	49,868
2017	53,571	3.86	37,714	5,358	7,156	50,228
2018	53,470	3.88	37,866	6,903	7,225	51,993
2019	53,369	4.02	39,106	7,085	5,629	51,820
2020	53,830	4.15	40,776	5,458	5,927	52,161

Source(s): Ohio EPA ADR Review Forms for 2016, 2017, 2018, 2019, and 2020 for population and waste disposal data.
Sample Calculation: Residential/Commercial + Industrial + Excluded = Total Waste
((Residential/Commercial tons * 2,000 pounds per ton) / 365 days) / Population = Residential/Commercial disposal rate

Table D-5a Annual Percentage Change

	Residential / Commercial	Industrial Solid Waste	Excluded Waste	Total Waste
2016				
2017	9%	-28%	-8%	1%
2018	0%	29%	1%	4%
2019	3%	3%	-22%	0%
2020	4%	-23%	5%	1%

Table D-5b Annual Change in Tons Disposed

	Residential / Commercial	Industrial Solid Waste	Excluded Waste	Total Waste
2016				
2017	3,079	-2,065	-654	360
2018	152	1,545	69	1,766
2019	1,240	182	-1,596	-174
2020	1,670	-1,627	298	341

Table D-5c Average Annual Percentage Change

Average Annual Percentage Change	
Residential/Commercial	4.21%
Industrial Waste	-4.83%
Excluded Waste	-6.05%

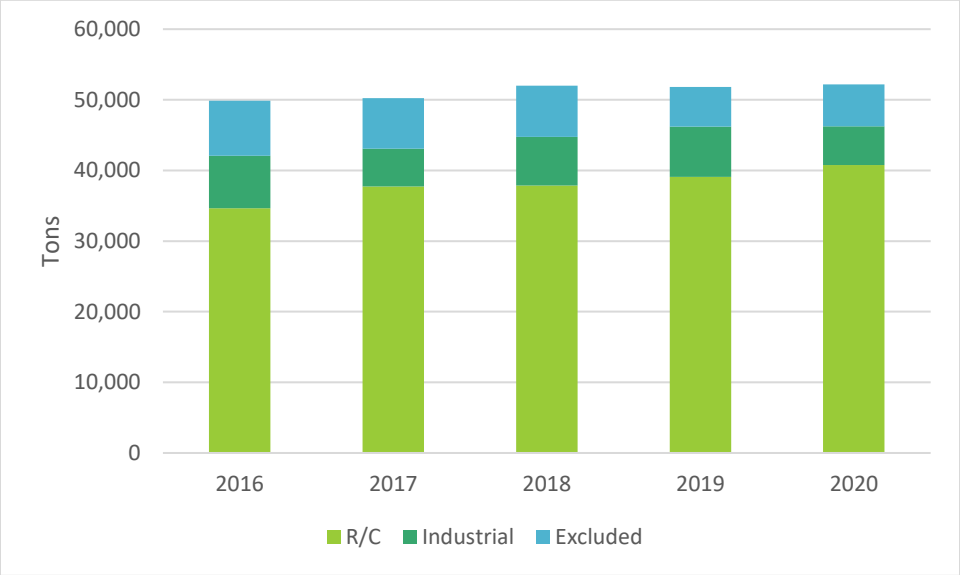
Table D-5d Average Annual Change in Tons Disposed

Average Annual Change in Tons Disposed	
Residential/Commercial	1,535
Industrial	-491
Excluded	-471

Table D-5e Average Per Capita Disposal Over Time

Average Per Capita Disposal Over Time (5 Years)	
Residential/Commercial	3.57

Figure D-1 Historical Waste Disposal



The disposal tonnages for the residential/commercial sector, industrial sector, excluded waste, and total disposal are shown graphically above. As seen in Figure D-1, total waste disposed was approximately 50,000 tons in 2016 and 2017 before increasing slightly to 52,000 tons in 2018. Total waste disposed reached a high point in 2020 with 52,161 tons of material disposed. The disposal rate has increased slightly over this span of time while population has fluctuated year over year. The population has increased by 198 residents since 2016.

Residential/commercial waste accounts for most of the total waste disposed of in the District historically. Figure D-1 shows an increase in residential/commercial waste disposed each year. During the five-year span, residential/commercial waste increased from 34,600 tons in 2016 to 40,800 tons in 2020, a 15% increase over the five years.

Despite the uptick in residential/commercial waste disposal, the overall disposal tonnages remained relatively constant. This is largely due to industrial waste and excluded waste totals dropping over five years. Industrial waste dropped from 7,400

tons in 2016 to 5,500 tons in 2020, a 26% decrease. Excluded waste decreased from 7,800 tons in 2016 to 5,900 tons in 2020, a 24% decrease. The following analysis will detail these patterns further.

1. Residential/Commercial Disposal

Figure D-2 Historical Residential/Commercial Disposal and Disposal Rate

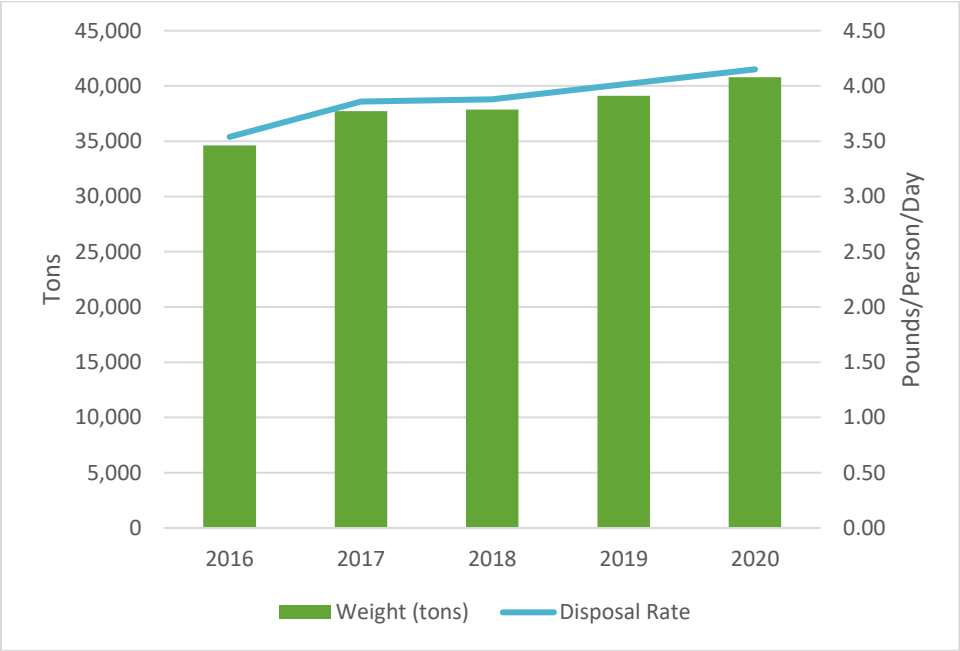


Figure D-2 shows the total amount of waste disposed and the rate of disposal in pounds/person/day. The population of the District increased a modest amount of 198 residents during this period. Despite the minimal increase, the amount of waste being disposed increased more drastically. Similarly, the amount of waste disposed pounds/person/day increased from 3.54 pounds in 2016 to 4.15 pounds/person/day in 2020, a 17% increase. The tons of residential/commercial waste disposed increased by an average of 3% annually.

The previous 2018 Plan projected a higher disposal rate of 5.09 pounds/person/day in 2020. It is likely the numbers differ because of previous projections of per capita disposal and how this was calculated. The previous plan assumed the per capita generation rate would increase by a constant number every year (0.084) from the value of 2014 (4.67 pounds/person/day). This number is already larger than the observed amount from the reference year, 2020, leading to the differences.

Figure D-3 Benchmark Per Capita Disposal

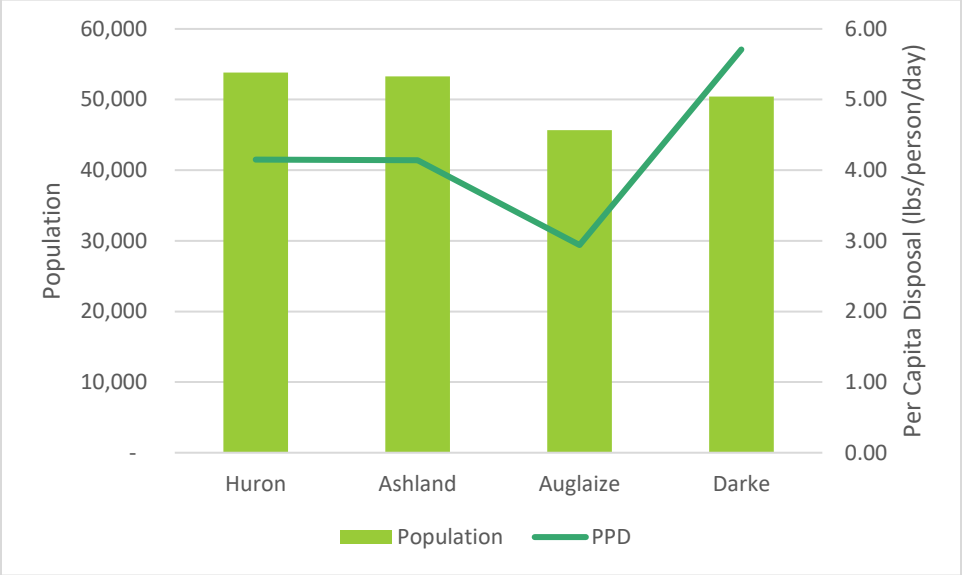
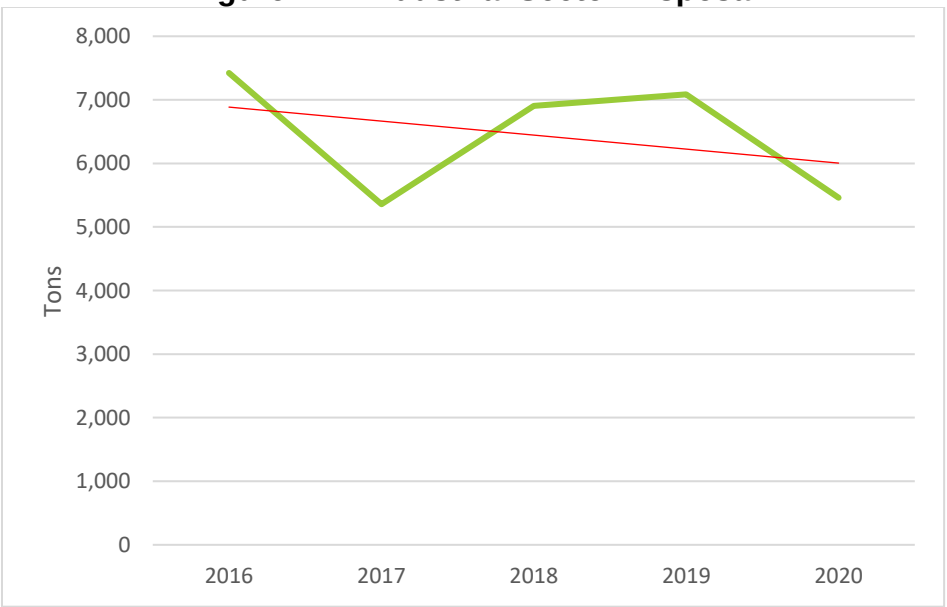


Figure D-3 compares the District's residential and commercial disposal rate to other districts in Ohio with similar populations. On average, Huron and the three counties used for comparison had a disposal rate of 4.24 pounds/person/day. The District's disposal rate is below that at 4.15 pounds/person/day. Darke County had the highest disposal rate of 5.71 pounds/person/day and Auglaize had the lowest at 2.94 pounds/person/day. Compared to other counties of similar population size, the District performs well and has a lower disposal rate than the average.

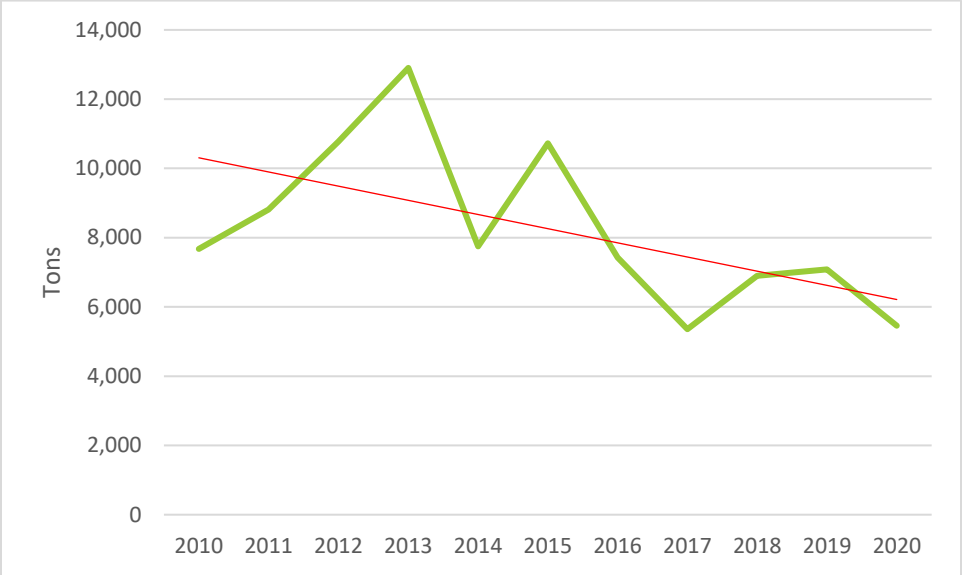
2. Industrial Sector Disposal

Figure D-4. Industrial Sector Disposal



Industrial waste accounts for just over 10% of the waste disposed in the reference year. Figure D-4 shows industrial waste has decreased in the five-year period, starting at 7400 tons, and ending at 5400 tons in 2020, a 27% decrease. The tons of industrial waste disposed of decreased by 4.83% annually.

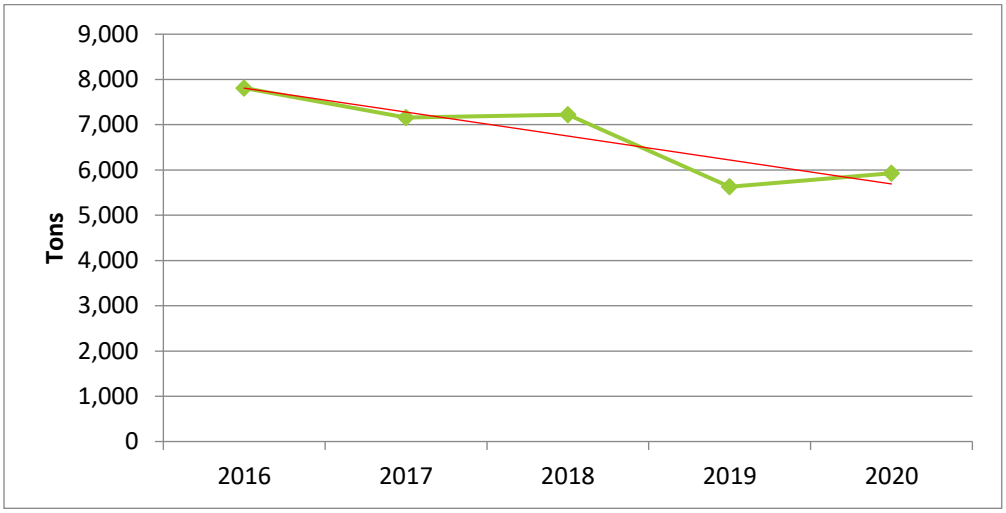
Figure D-5. Historical Industrial Sector Disposal



Looking at the historical data from the last 10 years, including the reference year, the general trend of a decreasing industrial sector remains true. However, the rate of change over the 10-year period was greater than over the five-year period shown in Figure D-4. There was a significant uptick in 2013 that reached the highest point of the period at nearly 13,000 tons that was immediately followed by a decrease in 2014 to roughly 7,800 tons, a 40% decrease in one year. Research shows manufacturing employment declining over this timeframe, and thus, the District would expect a declining waste disposal. The District is uncertain why the uptick in industrial disposal occurred.

3. Excluded Waste Disposal

Figure D-6. Excluded Waste Disposal



Excluded waste contributed between 16% to 11% of total disposal in the District over the past 5 years, averaging 13% of the total waste disposed annually. The amount of excluded waste dropped steadily over the five-year period, save for the year 2018 which saw a slight increase of roughly 75 tons from the previous year. There was a significant drop of 22% in 2019 from the previous year. The tons of excluded waste disposed decreased by an average of 6.05% annually.

Excluded wastes includes slag, uncontaminated earth, non-toxic fly ash, spent non-toxic foundry sand and material from mining, construction, or demolition operations.

C. Disposal Projections

There are several methods that can be used for projecting waste disposal through the planning period. These include historical per capita, historical averages, and historical trends. After conducting the historical analysis and considering factors that could change historical trends, waste disposal is projected in Table D-6 below. For residential/commercial projections this analysis used a constant increase of 1,000 tons annually based on historical data. For the industrial sector, the District used the Ohio Job Outlook Projections of Northeast Ohio data. The projected average annual percent change for Ohio's Northeast industrial sector is a decrease of 0.57%. This declining percentage is used for the District's industrial waste generation projection. Finally, for excluded waste the District held waste at the 10-year average value from 2010-2020 of 6,672 tons because there was not enough insight to changes and historical data to make an accurate projection using other factors.

Waste transferred annually was determined by first determining the percentage of waste that was transferred in the reference year. That percentage, 81%, is the percentage of total waste in the reference year that was taken to a transfer facility prior to being

disposed of at a landfill. Based on analysis of available capacity, the District does not identify any reasons the amount of transferred waste will change. Therefore, annual transferred waste projections are calculated as a percentage of total waste disposed.

Table D-6. Waste Disposal Projections

Year	Residential/ Commercial Solid Waste	Industrial Solid Waste	Excluded Waste	Total Waste	Waste Transferred (as part of Total Disposal)	Waste Transferred (as part of Total Disposal)
	Weight	Weight	Weight	Weight	Weight	Percent
	(tons)	(tons)	(tons)	(tons)	(tons)	81%
2020	40,776	7,673	4,266	52,715	42,172	
2021	41,776	7,629	6,672	56,077	45,512	
2022	42,776	7,586	6,672	57,034	46,338	
2023	43,776	7,543	6,672	57,991	47,164	
2024	44,776	7,500	6,672	58,948	47,990	
2025	45,776	7,457	6,672	59,905	48,817	
2026	46,776	7,414	6,672	60,862	49,643	
2027	47,776	7,372	6,672	61,820	50,470	
2028	48,776	7,330	6,672	62,778	51,296	
2029	49,776	7,288	6,672	63,736	52,123	
2030	50,776	7,247	6,672	64,695	52,949	
2031	50,776	7,247	6,672	64,695	53,776	
2032	50,776	7,247	6,672	64,695	54,603	
2033	50,776	7,247	6,672	64,695	55,429	
2034	50,776	7,247	6,672	64,695	56,256	
2035	50,776	7,247	6,672	64,695	57,083	
2036	50,776	7,247	6,672	64,695	57,910	
2037	50,776	7,247	6,672	64,695	58,737	
2038	50,776	7,247	6,672	64,695	59,563	

Source(s):
2020 Ohio EPA ADR Review Form
Ohio JFS 2028 Ohio Job Outlook Northeast Ohio Projections.

1. Residential/Commercial Sector

For the reference year and four years prior, the residential/commercial waste disposal in the district ranged from 34,000 tons to almost 41,000 tons, following an increasing trendline every year. Disposal projection rates were based on historical data and set to a flat annual increase of 1,000 tons. Projections are flatlined after the seventh year of the planning period.

2. Industrial Sector

For the reference year and four years prior, industrial waste disposal follows a decreasing trendline even though both 2018 and 2019 saw increased disposal. Industrial waste disposal in 2018 had a 1,300-ton increase compared to the

previous year. Then in 2020, industrial waste disposal decreased 1,400 tons compared to 2019. With the rise and fall peaks and troughs the District researched manufacturing employment data for another outlook.

The Ohio Department of Jobs and Family Resources projected industry decreases of 5.7% in manufacturing employment over the next ten years. Annualizing this over ten years calculates to a 0.57% annual decrease. Expecting decreased employment to mirror waste disposal, the District used this annual rate of decline to project the annual tonnage changes for industrial waste disposal in the District. Projections are flatlined after the seventh year of the planning period.

3. Excluded Waste

For the reference year and four years prior, excluded waste disposed were as high as 7,810 tons in 2016 and as low as 5,629 in 2019. The years 2018 and 2020 both saw slight increases in excluded waste disposal compared to their respective previous years, but the total tonnage disposed has followed a decreasing trendline over the past five years.

The District calculated the previous 10 years' average value for excluded waste tonnages disposed at 6,672 and will hold this value constant due to a lack of insight to changes and historical data.

D. Waste Imports

The District does not have an active open landfill located inside its county, therefore there is no data on waste imports. Furthermore, there are no plans currently to create a landfill in the District boundaries. There are no projections for waste imports because of this.

Table D-7. Waste Imports

	Year																						
Facility Name	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
None																							
Total Imported	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

APPENDIX E

RESIDENTIAL/COMMERCIAL REDUCTION AND RECYCLING DATA

APPENDIX E. Residential/Commercial Reduction and Recycling Data

This Appendix presents the reduction and recycling data for the residential and commercial sectors in the 2020 reference year. To avoid double-counting tonnages, adjustments were made to tonnages reported by different types of entities, such as programs, brokers, and scrap yards. An item is "double counted" if the quantities from both respondents are calculated in the total recovery. A historic analysis of the residential/commercial sector's recycling is included in this Appendix. Information in this section as well as information from other sources was used to calculate the recycling projections from 2020 to 2038 which are included at the end of this Appendix.

A. Reference Year Recovery Data

Table E-1. Commercial Survey Results

NAICS	WG	EW	LAB	FS	FM	NFM	OCC	MxP	PL	W	R	CoM	YW	DCB	UO	FB	IT	Total
42							106		12									
44	0	0	15		22	2	79	1	0						20	0	0	
45					21	2	37	40	1				30					
52							0	0	0									
54							1	1				0						
56							25		10									
62				16								66						
72					0	0	170					21		0				
81			160			1	101	401	50	0	0	1						
92												721	1,495					
Total	**0**	**0**	**175**	**16**	**43**	**4**	**518**	**443**	**73**	**0**	**0**	**808**	**1,525**	**0**	**20**	**0**	**0**	**3,626**
Adj.			**161**		**1**	**1**		**42**	**0**	**0**		**808**	**520**			**0**		**1534**
Adj. Total	**0**	**0**	**14**	**16**	**42**	**3**	**518**	**400**	**73**	**0**	**0**	**0**	**1,004**	**0**	**20**	**0**	**0**	**2,092**

NAICS stands for The North American Industry Classification System and is used by the United States, Canada, and Mexico to classify businesses by industry
Source(s) of Information: District surveys conducted to gather 2020 recycling data.
NAICS = North American Industrial Classification System
WG = Appliances/ "White Goods", EW = Electronics, LAB = Lead-Acid Batteries, FS = Food Scraps, FM = Ferrous Fetals, NFM = Non-Ferrous Metals, OCC = Corrugated Cardboard, MxP =Mixed Paper, PL = Plastics, W = Wood, R = Rubber, CoM = Commingled Recyclables (Mixed), YW = Yard Waste, DCB= Dry-Cell Batteries UO = Used Motor Oil, FB = Fluorescent Bulbs, IT = Ink & Toner Cartridges, Adj. = Adjusted or Adjustments
Note: Numbers are rounded to the nearest whole number.

Table E-1 shows commercial data contained from the District's survey efforts. The District issued a survey to capture 2020 diversion data for the commercial sector. Adjustments were needed to avoid double counted data that was reported by other sources such as processors and transporters.

Table E-2. Data from Other Recycling Facilities

Source of Materials	LAB	GL	FM	NFM	OCC	MxP	PL	CoM	YW	ST	Total
Buybacks											
None											
Scrap Yards											
None											
Brokers											
BR 1						40					
Processor/ MRF's											
PR 1	1		112		377	41		770	60	31	
PR 2		158	22	7	29	237	86				
PR 3			15								
PR 4			2	2	450	600	1				
PR 5					22			770			
Total	1	158	151	9	878	918	87	1,539	60	31	**3,832**
Adj.	1		112					1,539	60	31	**1743**
Adj.Total	**0**	**158**	**39**	**9**	**878**	**918**	**87**	**0**	**0**	**0**	**2,088**

Source(s) of Information: 2020 Ohio EPA Material Recovery Facility and Commercial Recycling Data. SWMD surveys to gather 2019 data for Buybacks, Scrap Yards, and Brokers.
Note: Numbers are rounded to the nearest whole number
WG = Appliances/ "White Goods", EW = Electronics, LAB = lead-acid batteries, FS = Food Scraps, GL = Glass, FM = ferrous metals, NFM = non-ferrous metals, OCC = Corrugated Cardboard, MxP = mixed paper, PL = plastics, Tx = Textiles, W = wood, R = Rubber, CoM = Commingled Recyclables (Mixed), YT = Yard Trimmings, UO = used motor oil, ST = Scrap Tires, DCB= Dry-cell Batteries, Adj. = Adjusted or Adjustments

Table E-2 contains tonnage information collected from the buyback surveys and Ohio EPA reports. Processors, buybacks, and MRFs capture recyclables and process them to prepare them for recycling. Adjustments were made to the mixed recyclable and scrap tire tonnages to prevent double counting.

Table E-3. Data Reported to Ohio EPA by Commercial Businesses

Ohio EPA Data Source	PL	OCC	MxP	NFM	Food: Compost	Other	Total	Adj.	Adj. Total
Walgreens		3							
Walmart	24	786	2	0		32			
USPS	2	7	127						
Big Lots		24							
Dollar General	2	260	1						
Aldi Hinckley Division	2	149			8				
Unadjusted Total	31	1,229	131	0	8	32	1,430		

Adjustments					8		8	
Adjusted Total	**31**	**1,229**	**131**	**0**	**0**	**32**	**1,422**	

Source(s) of Information: 2019 Ohio EPA Material Recovery Facility and Commercial Recycling Data
PL = Plastics, FM = Ferrous Metals, NF = Non-Ferrous Metals, OCC = Corrugated Cardboard, MxP = Mixed Paper, W = Wood, CoM = Commingled Recyclables (Mixed)
Assumptions**:** No adjustments were made to data reported to Ohio EPA.
Note: Numbers are rounded to the nearest whole number.

Quantities reported in Table E-3 were obtained from the Ohio EPA Material Recovery Facility and Commercial Recycling Data Report. The only adjustment made was to food compost to prevent double counting.

Table E-4. Other Recycling Programs/Other Sources of Data

Other Sources of Data	ST	LAB	FS	FM	CoM	YW	*Totals*	*Adj.*	*Adj. Totals*
Curbside					697		697	697	0
Drop-Off					1,301		1,301		1,301
Compost Facilities			80			447	527		527
Ohio EPA Scrap Tire Data	431						431		431
Lead Acid Battery		1					1	1	0
Scrap Tire Collection	31						31	31	0
Huron County Compost Facility						60	60	60	0
Yard Waste Management						507	507	507	0
Appliance Collection				112					
Unadjusted Total	461	1	80	112	1,998	1,013	3,666	355	3,312
Adjustments	31				324		354		
Adjusted Total	**431**	**0**	**80**	**112**	**1,675**	**1,1013**	**3,312**		

Source(s) of Information: 2020 Ohio EPA Scrap Tire Report, 2020 Ohio EPA Compost Report, Survey Data
HHW = Household Hazardous Waste, ST = Scrap Tires, FS = Food Scraps, GL = Glass, FM = Ferrous Metals, NFM = Non-Ferrous Metals, OCC = Corrugated Cardboard, MxP = Mixed Paper, PL = Plastics, CoM = Commingled Recyclables (Mixed), YT = Yard Trimmings, Adj. = Adjusted or Adjustments
Note: Numbers are rounded to the nearest whole number.

Table E-4 presents tonnages diverted through programs and services the District offers in the reference year. This table includes all residential and commercial programs/services through which materials being credited to total diversion were recovered. Some material collected from the programs above are recycled to a processor (see Table E-2) and therefore are credited to the processor to prevent double counting. Scrap tire collection, lead-acid batteries, commingled recyclables, and yard waste have all been adjusted to account for the double counting.

Table E-5. Residential/Commercial Material Recovered in Reference Year

Material	Tons	ADR Tons	Difference
Appliances/ "White Goods"	0	0	0
Household Hazardous Waste	0	0	0
Used Motor Oil	20	20	0
Electronics	0	2	-2
Scrap Tires	431	431	0
Dry Cell Batteries	0	0	0
Lead-Acid Batteries	15	15	0
Food	96	96	0
Glass	158	158	0
Ferrous Metals	193	187	6
Non-Ferrous Metals	13	14	-1
Corrugated Cardboard	2,625	2,265	0
All Other Paper	1,449	1,449	0
Plastics	190	190	0
Textiles	0	0	0
Wood	0	0	0
Rubber	0	0	0
Commingled Recyclables (Mixed)	1,674	1,674	0
Yard Waste	2,018	2,018	0
Other (Aggregated)	32	32	0
Grand Total	**8,914**	**8,911**	**3**

Source(s) of Information: 2020 ADR Calculation Spreadsheets, 2020 Ohio EPA MRF Reports, 2020 Ohio EPA Scrap Tire Report, 2020 District program and survey data, 2020 Ohio EPA Compost Report, 2020 ADR Review Forms
Note: Recorded tons and ADR tons differ due to inaccurate commercial survey responses that were adjusted to the correct NAICS codes, see below for more information.
Note: All numbers are rounded to the nearest whole number.

The District diverted 8,914 tons from the residential/commercial sector. Table E-5 reports quantities of each material diverted. Most of the waste diverted came from cardboard, yard waste, mixed recyclables, and paper.

Table E-5 has two additional columns, these are “ADR tons” and “Difference”. The ADR Tons column shows what was recorded in the reference year ADR, the difference column presents the difference between the 2024 Plan workbook calculation spreadsheets and the ADR. The reason there is a discrepancy between the ADR numbers and the 2024 Plan workbook calculations is because of an incorrect survey response from three businesses that were corrected.

Three survey respondents mistakenly listed their NAICS codes as commercial responses instead of industrial. For accuracy, these respondents were switched from the commercial survey responses to the industrial survey responses and NAICS codes adjusted, correspondingly, to reflect the proper code.

Table E-5 details the changes that occurred with this switch. Electronic material diversion dropped by two tons, ferrous metals increased by six tons, and non-ferrous metals decreased by one ton. Together, this correction accounted for a difference of three tons.

Table E-6. Quantities Recovered by Program/Source

Program/Source of R/C Recycling Data	Quantities (Tons)
Commercial Survey	2,092
Data from Other Recycling Facilities	2,088
Ohio EPA Commercial Retail Data	1,422
Curbside	697
Drop-off Program	977
Composting Facilities	527
Other Food and Yard Waste Management	0
Ohio EPA Scrap Tire Data	400
Lead Acid Battery	1
Scrap Tire Collection	31
Huron County Compost Facility	60
Yard Waste Management	507
Appliance Collection	112
Total	**8,914**

Source(s) of Information: Tables E-1 E-2, E-3, and E-4.

Table E-6 reports tonnages diverted for each program/source in the reference year using information from the Tables E-1 to E-4 above.

B. Historical Recovery

In the reference year, the three largest sources of recycling data were the commercial survey, data from other recycling facilities, and the Ohio EPA commercial retail data. Together, these three sources accounted for 70% of all recycling data reported. The remaining information came from a variety of other sources that can be seen below in Figure E-1.

Figure E-1. Recycling by Source

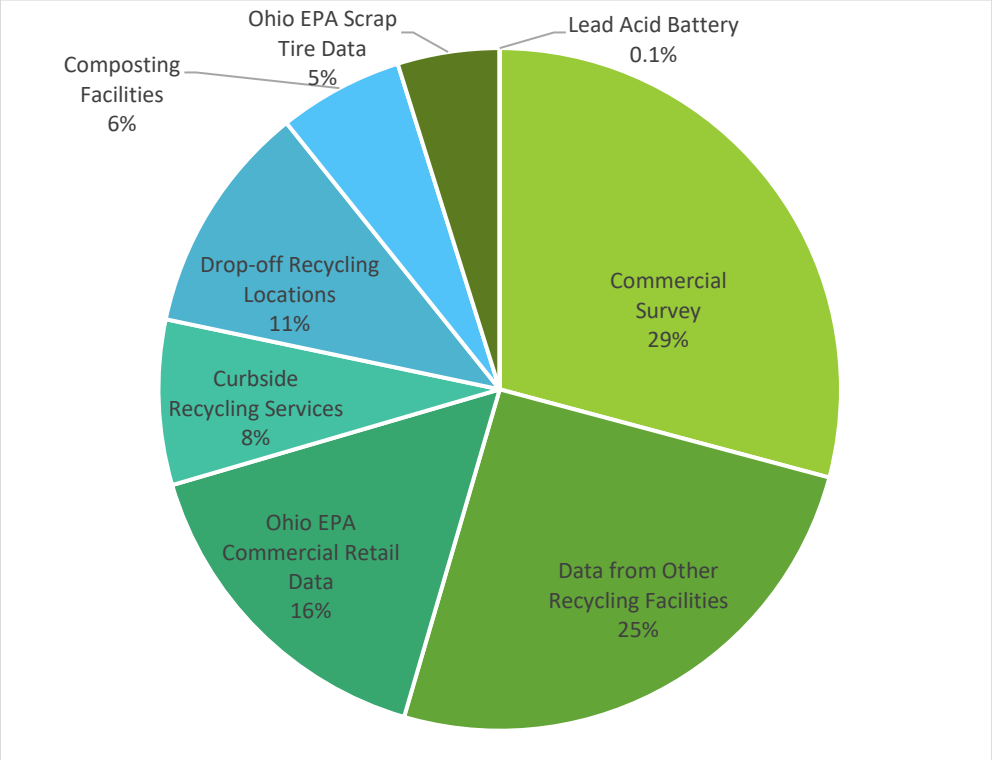


Table E-7 Historical Residential/Commercial Recovery by Program/Source

Year	Commercial Survey	Data from Other Recycling	Ohio EPA Commercial Retail Data	Curbside Recycling Services	Drop-off Recycling Locations	Composting Facilities	Other Food and Yard Waste Management	Ohio EPA Scrap Tire Data	Lead Acid Battery	Scrap Tire Collection	Huron County Compost Facility	Yard Waste Management	Appliance Collection	**Totals**
2016	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12,917
2017	1,406	4,868	1,229	781	435	920	0	646	2	23	22	238	76	10,647
2018	231	92	1,509	777	717	258	0	642	1	22	51	270	71	4,641
2019	1,235	1,095	1,450	1,173	1,165	322	0	625	1	14	0	126	81	7,289
2020	***2,092***	***2,088***	***1,422***	***697***	***977***	***527***	***0***	***400***	***1***	***31***	***60***	***507***	***112***	***8,914***

Table E-7a1 Annual Percent Change in Tons Recovered

2016														
2017	NA	NA	1%	-15%	NA	116%	NA	11%	NA	NA	NA	NA	25%	-18%
2018	-84%	-98%	23%	-1%	65%	-72%	NA	-1%	-44%	-7%	129%	13%	-7%	-56%
2019	435%	1088%	-4%	51%	62%	25%	NA	-3%	0%	-34%	-100%	-53%	15%	57%
2020	***69%***	***91%***	***-2%***	***-41%***	***-16%***	***63%***	**NA**	***-36%***	***12%***	***-113%***	NA	***-301%***	***-38%***	***22%***

Table E-7a2 Average Percentage Change in Tons Recovered

	140%	360%	6%	3%	37%	6%	NA	-13%	-11%	24%	NA	87%	-15%	8%

Table E-7a3 Annual Change in Tons Recovered

2016														
2017	NA	NA	14	-138	NA	494	0	62	2	NA	NA	NA	15	-2,270
2018	-1,175	-4,776	280	-4	282	-662	0	-4	-1	-2	29	32	-6	-6,006
2019	1,004	1,003	-58	396	448	65	0	-18	0	-7	-51	-144	11	2,649
2020	***857***	***993***	***-28***	***-476***	***-188***	***205***	***0***	***-225***	***0***	***16***	***60***	***380***	***31***	***1,625***

Table E-7a4 Annual Per Capita Recovery Rate (pounds/person/day)

Population														
58,367	2016	NA	NA	0.12	0.09	NA	0.04	0.00	0.06	0	NA	NA	NA	0.01	1.32
58,393	2017	0.14	0.50	0.13	0.08	0.04	0.09	0.00	0.07	0	0.00	0.00	0.02	0.01	1.09
58,364	2018	0.02	0.01	0.15	0.08	0.07	0.03	0.00	0.07	0	0.00	0.01	0.03	0.01	0.48
58,266	2019	0.13	0.11	0.15	0.12	0.12	0.03	0.00	0.06	0	0.00	0.00	0.01	0.01	0.75
58,565	***2020***	***0.21***	***0.21***	***0.14***	***0.07***	***0.10***	***0.05***	***0.00***	***0.04***	***0***	***0.00***	***0.01***	***0.05***	***0.01***	***0.91***

Table E-7a5 Average Per Capita Recovery Rate

0.13	0.21	0.14	0.09	0.08	0.05	0.00	0.06	0.00	0.00	0.00	0.03	0.01	0.81

Table E-7a6 Average Tons of Material Recovered

1,241	2,036	1,403	857	823	507	0	578	1	23	33	285	85	7,783

Sources: 2016, 2017, 2018, 2019, 2020 Annual District Report
Commercial Survey Results
Ohio EPA Material Recovery Facility Report
Ohio EPA Scrap Tire Report

Tables E-7 through E-7a6 show historical data collected from the District. The challenge with analyzing programmatic data such as above is that each year there are differences in how the data was recorded. For instance, in 2020 curbside recycling services dropped from 1,173 tons in 2019 to 697 tons in 2020. This significant change resulted because two haulers, Gateway, and Republic, stopped reporting to the Ohio EPA. These differences can result in fluctuations between recording years and can cause the data analyzation to be difficult. Survey responses such as these impact the overall data and cause differences between years. The data is only as accurate as those who responded to it.

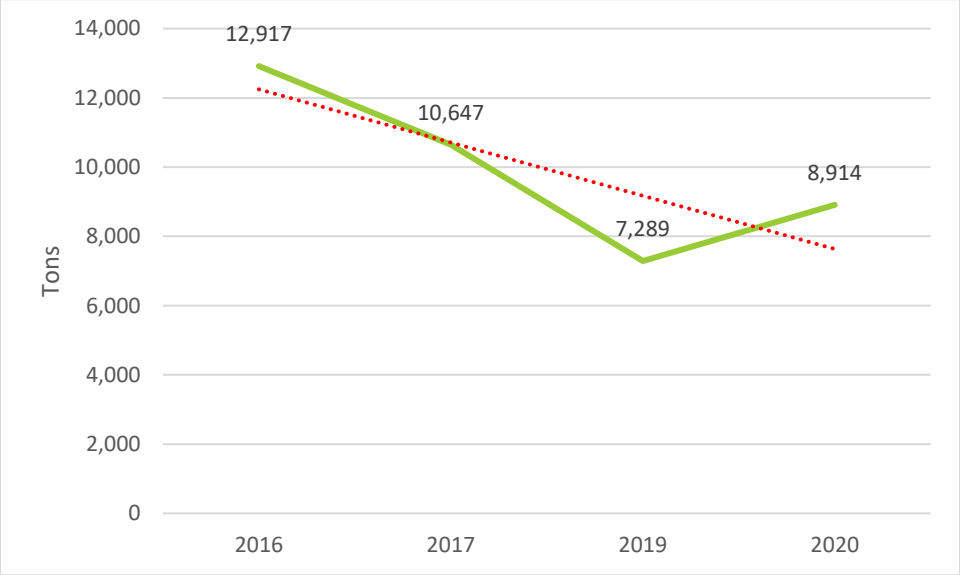
Additionally, as can be seen in Table E-7, the 2018 values for the commercial survey and data from other facilities is an outlier year. These values are resulting from a combination of lack of reporting and a significant drop data that was reported. For example, a hauler, Norwalk Industries, stopped reporting and the District has not received any information since. Because of the large differences from 2018 compared to other years, this year is considered an outlier and was not used in any calculations below or projections in later sections.

Note, the quantities in the year 2016 labeled as “NA”, not available, are intentionally labeled so. The District was not able to receive adequate historical information from this year. However, the District was able to receive the total quantities from this year. As a

result, the total quantities from 2016 are the only values included in the calculations above and used to project future quantities in later calculations, all other values were not used from 2016.

As presented in Tables E-7 through E-7a6 the five-year average, including the 2016 total values, tons of material recovered is 9,942 tons with an average percent change of 21%. However, these numbers are misleading. Upon closer analysis, the District has seen high volatility in the annual percent change totals. This volatility has caused the average to be a 21% annual change while the individual numbers range from -18% to 57% annual change. Similarly, the average tons of material recovered is also misleading. While the average is 9,942, the District has not observed these diversion tonnages since 2017. In recent years, the total tons recovered has been much lower. The average from the reference year and previous year is 8,101 tons. As can be seen below in Figure E-2 the District has a negative overall trendline over the previous five years for recovered material.

Figure E-2: Historical R/C Total Recovery



The District saw steady decline in recovery from 2016 to 2019 before the uptick in 2020 of about 1,700 tons of material recycled, a 22% increase. Despite a recent negative trendline, the District is projecting diversion to decrease initially but then steadily rise in the following years. Section C below explores these projections per sector in greater detail.

C. Residential/Commercial Recovery Projections

Year	Commercial Survey	Data from Other Recycling Facilities	Ohio EPA Commercial Retail Data	Curbside Recycling Services	Drop-off Recycling Locations	Composting Facilities	Ohio EPA Scrap Tire Data	Lead Acid Battery	Scrap Tire Collection	Huron County Compost Facility	Yard Waste Management	Appliance Collection	Totals
2020	2,092	2,088	1,422	697	977	527	400	1	31	60	507	112	8,914
2021	1719	2,829	1,422	696	982	527	410	1	14	0	126	81	8,807
2022	1714	2,822	1,422	694	987	527	420	1	14	0	126	81	8,809
2023	1710	2,815	1,422	692	992	527	430	1	14	0	126	81	8,811
2024	1706	2,808	1,422	690	997	527	440	1	14	0	126	81	8,813
2025	1702	2,801	1,422	689	1,002	527	450	1	14	0	126	81	8,816
2026	1697	2,801	1,422	687	1,007	527	460	1	14	0	126	81	8,823
2027	1691	2,801	1,422	684	1,012	527	470	1	14	0	126	81	8,831
2028	1686	2,801	1,422	682	1,017	527	470	1	14	0	126	81	8,828
2029	1681	2,801	1,422	680	1,022	527	470	1	14	0	126	81	8,826
2030	1675	2,801	1,422	678	1,027	527	470	1	14	0	126	81	8,823
2031	1,760	2,784	1,422	676	1,032	527	470	1	14	0	126	81	8,894
2032	1,760	2,784	1,422	676	1,032	527	470	1	14	0	126	81	8,894
2033	1,760	2,784	1,422	676	1,032	527	470	1	14	0	126	81	8,894
2034	1,760	2,784	1,422	676	1,032	527	470	1	14	0	126	81	8,894
2035	1,760	2,784	1,422	676	1,032	527	470	1	14	0	126	81	8,894
2036	1,760	2,784	1,422	676	1,032	527	470	1	14	0	126	81	8,894
2037	1,760	2,784	1,422	676	1,032	527	470	1	14	0	126	81	8,894
2038	1,760	2,784	1,422	676	1,032	527	470	1	14	0	126	81	8,894

Sources: Year 2020 Data Sources: Commercial Survey from District survey efforts, Data from other recycling facilities from Ohio EPA MRF report, Ohio EPA commercial retail data from Ohio EPA MRF report, Ohio EPA compost data from Ohio EPA Compost report (includes food waste), Ohio EPA scrap tire data from Ohio EPA reports, Specific program data from historical Annual District Reports
Note: Lead Acid Battery, Scrap Tire Collection, Huron County Compost Facility, Yard Waste Management, and Appliance Collection all have values of 0 in 2020 as this was one of the effects of the COVID-19 Pandemic. None of these programs were active in 2020.

As discussed in Section B, there were a few challenges in assessing the historical recovery data for the District. These challenges also affect the projections listed above as the historical data is analyzed and used to make projections. Many of the projections above are flatlined after the seventh year of the planning period. The year 2018 is not included in any of the above projection calculations as it is an outlier.

A further challenge in projecting future generation, disposal, and recovery is the COVID-19 pandemic. The pandemic had numerous impacts on solid waste systems such as consumption / disposal rates and patterns, altered procedures to proper disposal of waste, and the shut-down of existing programs. These challenges make it difficult to assess the historic data used to project future quantities for the District as two of the five years of historical data (2019, 2020) recorded were while the pandemic was active.

Commercial Survey Projections:

These projections were calculated based on the historical per capita recovery rate. The average annual per capita recovery rate was 0.16 pounds per person per day. This number was then multiplied by the respective year's population and converted into tons per year. The projections flatline after six years.

Sample Calculation 2022: ((0.16 * 58,283) / 2000) * 365 = 1,714 tons

Data From Other Recycling Facilities Projections:

These projections follow the same formula as the commercial survey projections. The projections were flatline after six years.

Sample Calculation 2022: ((0.27 * 58,283) / 2000) * 365 = 2,918 tons

Ohio EPA Commercial Survey Data Projections:

These projections were held constant throughout the planning period as this data is independently acquired by the Ohio EPA and is out of the District's control.

Curbside Recycling Projections:

In the reference year the city of Norwalk recorded a total of 697 tons of curbside recycling. This was the only recorded quantity for the county. These projections therefore used the city of Norwalk's recorded tons and the City's population projections to calculate the pounds per person per year recovered. This was then converted to tons per year.

Sample Calculation 2022: ((0.07 * 58,283) / 2000) * 365 = 694 tons

Drop-Off Recycling Projections:

Based on historical data, a flat 5% increase was added to the previous year's recovery totals.

Sample Calculation 2022: 982 * (1+.05) = 987 tons

Compost Projections:

Due to the inconsistent historical data of compost facility recoveries, the District flatlined the reference year value of 527 tons for these projections through the planning period.

Ohio EPA Scrap Tire Data Projections:

Based on historical analysis, these projections were held at a constant increase of 10 tons per year until after the sixth year of the planning period where they were flatlined.

Sample Calculation 2022: 410 + 10 = 420 tons

Lead Acid Battery Projections:

The historical average prior to 2020, when this program was inactive, was 1 ton of lead acid batteries. The District will hold this value constant throughout the planning period.

Scrap Tire Collection Projections:

Due to a lack of historical data and COVID-19 pandemic causing this program to be inactive during the reference year, the district will hold the 2019 value constant through the planning period.

Huron County Compost Facility Projections:

Due to a lack of historical data and COVID-19 pandemic causing this program to be inactive during the reference year, the district will hold the 2019 value constant through the planning period.

Yard Waste Management Projections:

Due to a lack of historical data and COVID-19 pandemic causing this program to be inactive during the reference year, the district will hold the 2019 value constant through the planning period.

Appliance Collection Projections:

Due to a lack of historical data and COVID-19 pandemic causing this program to be inactive during the reference year, the district will hold the 2019 value constant through the planning period.

APPENDIX F

INDUSTRIAL SECTOR REFERENCE YEAR RECYCLING

APPENDIX F Industrial Reduction and Recycling Data

Appendix F contains an inventory of materials recovered from the industrial sector in the reference year. The following tables show adjusted quantitates to prevent double counting, calculate the total adjusted quantities of materials recovered, and analyzes industrial material recovery using historical data.

A. Reference Year Recovery Data

Tables F-1 through F-4 account for all material being credited to the waste reduction and recycling rate for the industrial sector.

Table F-1. Industrial Survey Results

NAICS	FS	GI	FM	NFM	OCC	AOP	PL	W	R	CoM	Other: HM	Other: Inc.	Other: Oil	*Total*	*Adj.*	*Adj. Total*
22																
31	2,790		70	15	3,694		108	58		11		225	1			
32			113	406	1,176	18,108		31	240	154	4,326		513			
33			14,401	5	1,222	1	1	7		41						
Total	2,790		14,583	426	6.092	18,109	109	97	240	206	4,326	225	513	47,715		
Adj.			19	1	112	201								332		
Adj. Total	2,790		14,565	424	5,980	17,908	109	97	240	206	4,326	225	513	47,383		

FS = food scraps, FM = ferrous metals, NFM = non-ferrous metals, OCC = old corrugated cardboard, AOP = all other paper, PL = plastics, W = wood, R = rubber, CoM = commingled, HM = hot melt, Inc = incinerated, Adj. = adjusted/adjustments
NAICS stands for The North American Industry Classification System and is used by the United States, Canada, and Mexico to classify businesses by industry
Source(s) of Information: Calendar year 2020 survey data as reported by industrial businesses.
Note: Numbers are rounded to the nearest whole number.

Table F-1 accounts for material recovered as reported by industrial businesses from the 2020 surveys. In some cases, businesses chose not to respond to the reference year but did respond to a prior year's survey. In these cases, the analysis used data from up to two previous years. Adjustments were made to the above Table F-1 to prevent double counting.

The data presented in Table F-1 is organized by the North American Industry Classification System (NAICS). Manufacturing industries are classified under sectors 31-33. Table F-1 sums all the quantities of reported material for each NAICS code.

Table F-2. Data from Other Recycling Facilities

Program and/or Source of Materials/Data	Food	Glass	Ferrous Metals	Non-Ferrous Metals	Corrugated Cardboard	All Other Paper	Plastics	Textiles	Wood	Rubber	Commingled Recyclables	Ash	Non-Excluded Flue-Gas Desulfurizati	Total
Processors/MRFs														
PR 1							275							
PR 2			15		1340	11	84							
Unadjusted Total			15		1340	11	359							1,725
Adjustments					1340									1,340
Adjusted Total			15		0	11	359							385

Source(s) of Information: Calendar year 2020 survey data as reported by industrial businesses.
Ohio EPA Material Recovery Facility data 2020.
Note: Numbers are rounded to the nearest whole number.

Table F-2 data is obtained from the district's industrial surveys and Ohio EPA's reports on processors/MRFs, scrap yards, and brokers. There were two processors who reported industrial waste diversion from district sources in the reference year. Adjustments have been made to corrugated cardboard to prevent double counting.

Table F-3. Other Recycling Programs/Other Sources of Data

Other Recycling Programs/Other Sources of Data	Food	Glass	Ferrous Metals	Non-Ferrous Metals	Corrugated Cardboard	All Other Paper	Plastics	Textiles	Wood	Rubber	Commingled Recyclables	Ash	Non-Excluded Foundry Sand	Flue-Gas Desulfurization Waste	
None															
Unadjusted Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Adjustments															0
Adjusted Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

There was no data reported for other sources of recycling in Table F-3.

Table F-4. Industrial Waste Reduced/Recycled in Reference Year

Material	Quantity (tons)
Food	2,790
Glass	0
Ferrous Metals	14,580
Non-Ferrous Metals	424
Corrugated Cardboard	5,980
All Other Paper	17,919
Plastics	468
Textiles	0
Wood	97
Rubber	240

Material	Quantity (tons)
Commingled Recyclables (Mixed)	206
Ash	0
Non-Excluded Foundry Sand	0
Flue Gas Desulfurization	0
Other (Aggregated)	5,064
Total	47,767

Source(s) of Information: 2020 ADR Calculation Spreadsheets, 2020 Ohio EPA MRF Reports, 2020 Ohio EPA Compost Report, 2020 ADR Review Forms
Note: Numbers are rounded to the nearest whole number.

Table F-4 reports quantities for each material diverted in The District as reported by the industrial waste survey. Other (Aggregated) combines hot melt, incinerated, and oil waste diverted. There was a total of 4,326 tons, 225 tons, and 513 tons diverted respectively. The District diverted a total of 47,767 tons of waste from the industrial sector.

Table F-5. Quantities Recovered by Program/Source

Program/Source of Industrial Recycling Data	Quantity (Tons)
Industrial survey	47,383
Data from other recycling facilities	385
Total	47,767

Source(s) of Information: Tables F-1 and F-2

Table F-5 details the total quantiles diverted by program/source.

B. Historical Recovery

Table F-6. Historical and Industrial Recovery by Program/ Source

Year	Industrial survey	Data from other recycling facilities	Totals
2016	NA	NA	NA
2017	51,410	11,902	63,311
2018	45,800	1,528	47,327
2019	46,082	1,725	47,808
2020	47,382	385	47,767

Table F-6a1. Annual Percentage Change in Tons Recovered

2016	NA	NA	NA
2017	NA	NA	NA
2018	-11%	-87%	-25%
2019	1%	13%	1%
2020	3%	-78%	0%

Table F-6a2. Average Annual Percentage Change in Tons Recovered

-2%	-51%	-8%

Table F-6a3. Annual Change in Tons Recovered

2016	NA	NA	NA
2017	NA	NA	NA
2018	-5,610	-10,374	-15,984
2019	283	197	480
2020	1,300	-1,340	-41

Table F-6a4. Average Annual Change in Tons Recovered

-1,343	-3,839	-5,182

Table F-6a5. Average Tons of Material Recovered

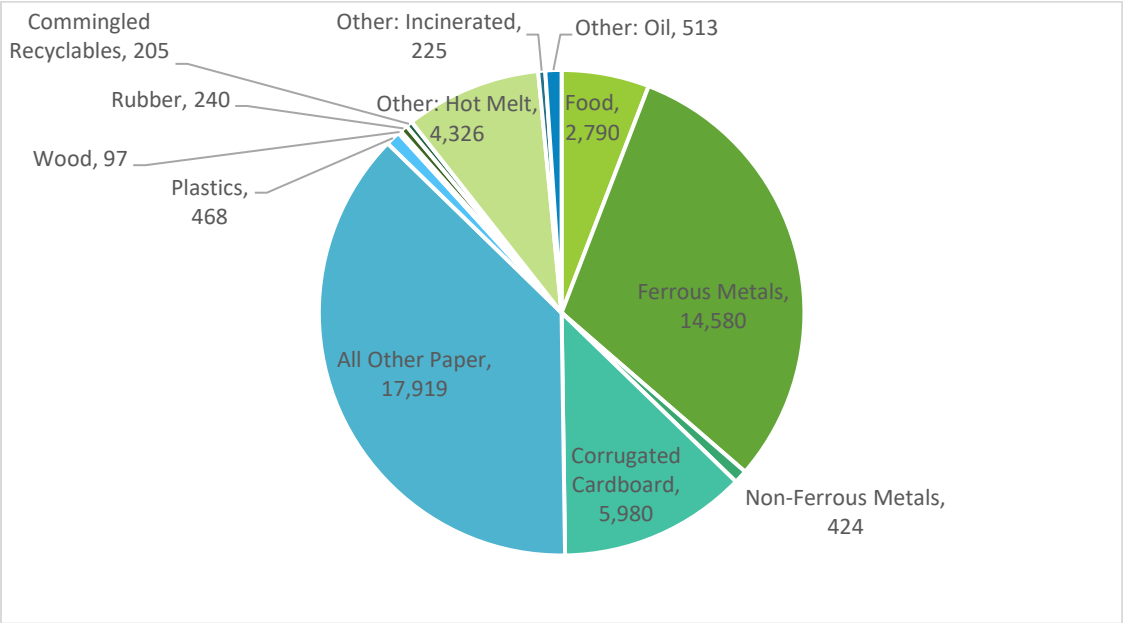
47,668	3,885	51,553

Source(s):
District Industrial Surveys for 2016 – 2020
"Material Recovery Facility and Commercial Recycling Data" for 2016-2020
Note: 2016 values were unable to be located and are therefore not included in any of the above calculations.

Data from the industrial sector is gathered from surveys and the Ohio EPA Material Recovery Facility data. As seen from Table F-6. Average industrial recovery from 2017 to 2020 was 51,533 tons and has decreased 8% on average annually. However, from 2018 to 2020, the recovered amount of material remained consistent. The reason for the average decrease of 8% lies with the large change from 2017 to 2018. The material recovered dropped 25% in 2018 from the previous year. It is possible that some respondents either stopped reporting to the District or no longer in business.

Most of the recovered industrial stream is mixed paper, ferrous metals, and corrugated cardboard. Together, these three materials make up nearly 81% of the total materials recovered during the reference year. Below is a breakdown of the tons of industrial material recovered in the reference year.

Figure F-1. Tons Industrial Materials Recovered



Note: Figure F-1 does not include glass, textiles, ash, non-excluded foundry sand, and flue gas desulfurization waste, all values for these materials are zero.

C. Industrial Recovery Projections

Table F-7. Industrial Recovery Projections

Year	Industrial survey	Data from other recycling facilities	Totals
2020	47,382	385	47,767
2021	47,112	383	47,495
2022	46,843	380	47,224
2023	46,576	378	46,955
2024	46,311	376	46,687
2025	46,047	374	46,421
2026	45,784	372	46,156
2027	45,523	370	45,893
2028	45,264	368	45,632
2029	45,006	366	45,372
2030	44,749	363	45,113

2031	44,494	361	44,856
2032	44,494	361	44,856
2033	44,494	361	44,856
2034	44,494	361	44,856
2035	44,494	361	44,856
2036	44,494	361	44,856
2037	44,494	361	44,856
2038	44,494	361	44,856

Source(s) of information: Table F-6

The Ohio Department of Development estimates that the northeastern region of Ohio will experience a 5.7% decline in manufacturing from 2018 through 2028. Using this information, the table above projects the total tonnages of industrial recovery for the District during the planning period. The District estimates that the decline in manufacturing will also result in a decline of industrial recovery by the same amount, 5.7% through 2028. In other words, the district estimates the amount of industrial recovery will decrease by 0.057% annually until 2028. Values after 2028 were flatlined as there was not enough information to project further into the planning period.

APPENDIX G

WASTE GENERATION

Appendix G Waste Generation

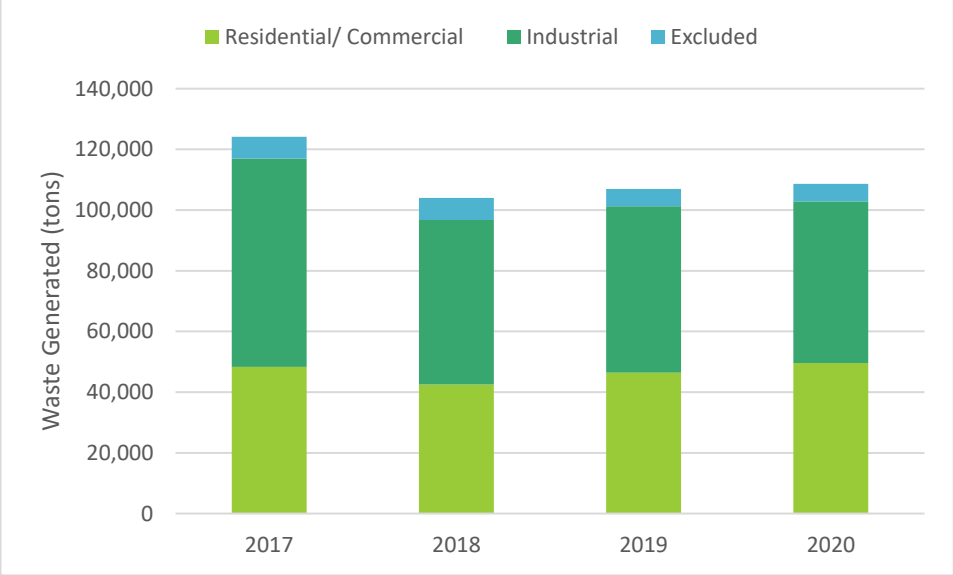
A. Historical Year Waste Generated

Table G-1 Reference Year and Historical Waste Generated

Year	Population	Residential/ Commercial				Industrial			Excluded (tons)	Total (tons)
		Disposed (tons)	Recycled (tons)	Generated (tons)	Per Capita Generated (ppd)	Disposed (tons)	Recycled (tons)	Generated (tons)		
2016	58,367	34,635	12,917	47,552	4.46	7,423	NA	7,423	7,810	62,785
2017	58,393	37,714	10,647	48,361	4.54	5,358	63,311	68,669	7,156	124,186
2018	58,364	37,866	4,641	42,507	3.99	6,903	47,327	54,230	7,225	103,962
2019	58,266	39,106	7,289	46,395	4.36	7,085	47,808	54,893	5,629	106,917
2020	58,565	40,719	8,914	49,632	4.64	5,458	*47,767*	*53,255*	5,843	108,701

Source(s): Disposal Data from Appendix D, Recycle Data from Appendix E and F, 2016 – 2020 Annual District Reports

Figure G-1. Historical Waste Generated

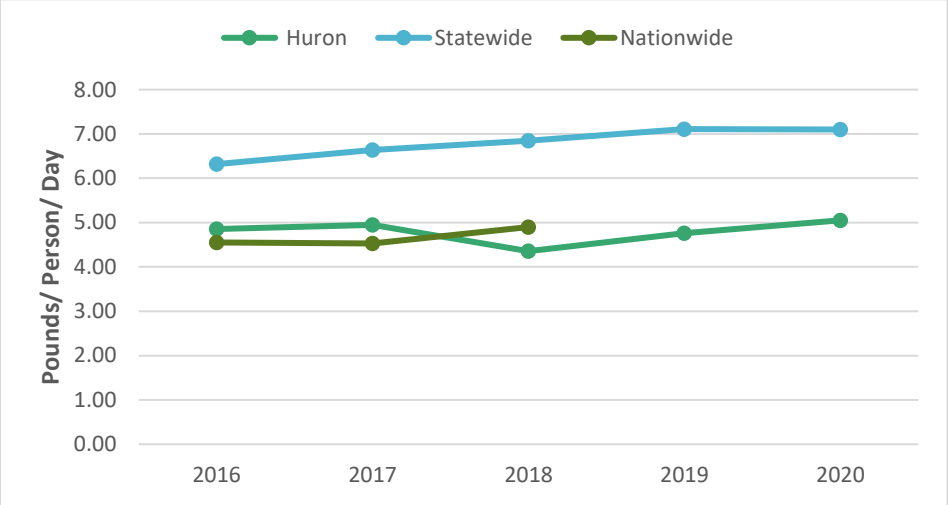


Note: 2016 values were unable to be located and therefore are not included in this historical data.

Total waste generated by the District was calculated by adding the quantities of waste disposed from Appendix D and quantities of recycled materials from Appendix E and F. Quantities resulted from the disposal and recycling of the district from 2017 to 2020 are shown above in Table G-1. Waste generation peaked in 2017 with 124,186 tons and declined to a low of 103,962 tons in 2018. The peak in 2017 resulted from a high reported recovery from “other recycling facilities”. The District was unable to obtain data from the industrial sector’s recycling totals for 2016 and therefore has not included it with the historical analysis. Figure G-1 above shows the breakdown by year of total waste generation. As can be seen, after a sizeable decrease in waste generated from 2017 to

2018, The District has remained between 103,000 and 107,00 from 2018 to the reference year.

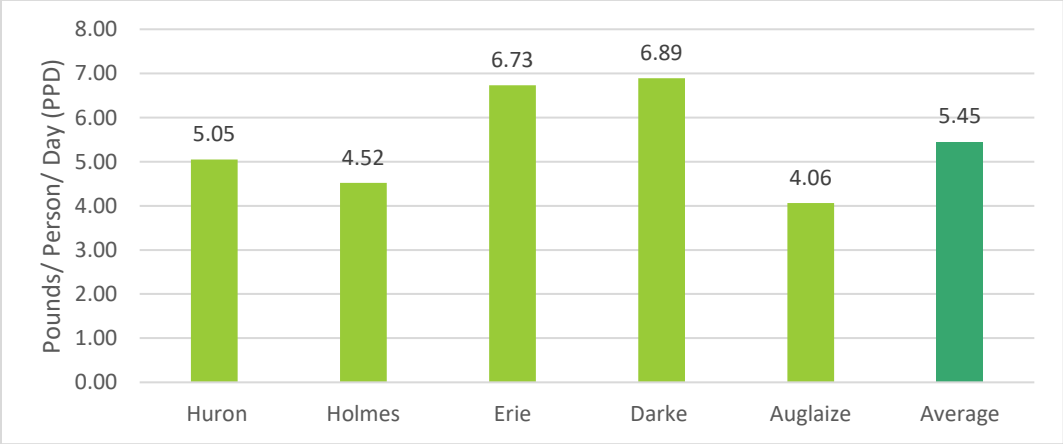
Figure G-2. Residential/ Commercial Per Capita Generation



Source(s) of Information:
National Average Per Capita Data: EPA National Overview: Facts and Figures on Materials, Wastes, and Recycling.
Ohio Per Capita Data: Ohio EPA Solid Waste Generated in Ohio – 2020
Note: National average per capita generation 2019 and 2020 was not published as of this report.

The District's historical residential/commercial generation per capita data was compared to the EPA's national average and the Ohio EPA's statewide average data. As seen in Figure G-2, The District's per capita generation has remained close to the national average through 2018. In this year the national average rose to 4.90 PPD and The District's fell to 4.36 PPD. The District saw a sharp rise in 2019 compared to 2018. It is likely this resulted from a population decrease paired with an increase in residential/commercial waste generation. The District reached its five-year historic peak in the reference year at 5.05 PPD, still well below the statewide average of 7.10 PPD. Note, the national average per capita data from 2019 and 2020 was not published as of this report.

Figure G-3. Benchmark Residential/Commercial Per Capita Rates

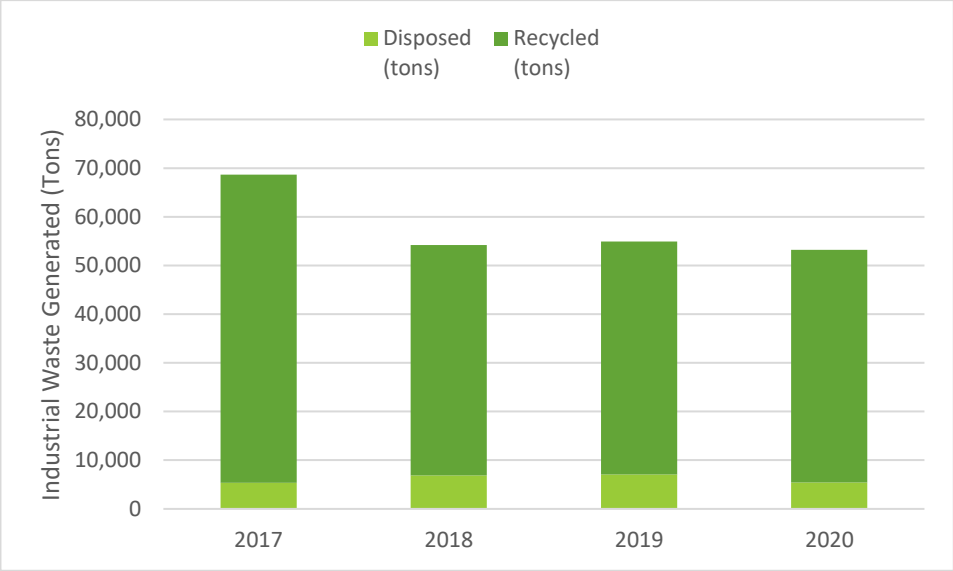


Source(s) of Information: Ohio EPA SWMD Disposal, Recycling, and Generation Report – 2020

Comparing the District to four other Districts of similar population size. Figure G-3 above details the comparison between the four and averages all five districts in the reference year. Comparing Huron with other similar population sized districts reveals the District's per capita generation rate is below the average of 5.45 PPD with only Holmes and Auglaize solid waste district's being lower. However, both of these Districts have lower populations than Huron.

Overall, the District is doing well relative to its peers and the State in terms of waste generation. The District should continue to be proactive in finding ways to reduce their generation and/or reduce waste disposed at landfills.

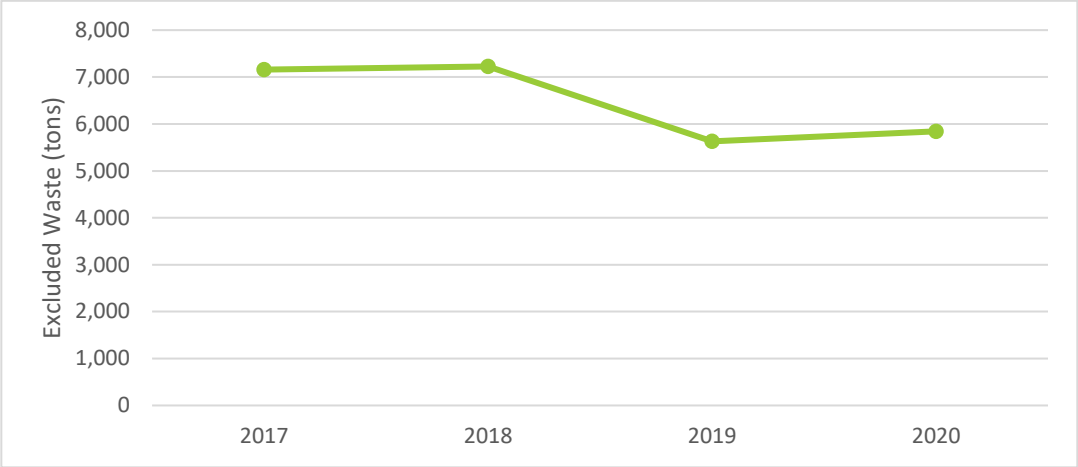
Figure G-4. Historic Industrial Waste Generated



Note: 2016 values were unable to be located and therefore are not included in this historical data.

Industrial waste generation has decreased from 2017 to 2020 except for a slight rise in 2019. The cause of the decrease in industrial waste generation lies primarily because of a reduction in tons recycled. Despite there being less overall recycling of industrial waste, the disposal rates increased slightly from 2017 to 2019 and dropped back down in 2020. The Districts industrial waste recycling rate ranged from a high of 92% to a low of 87% during the historical period.

Figure G-5. Excluded Waste Generated



Note: 2016 values were unable to be located and therefore are not included in this historical data.

The total tons of excluded waste generated by the District is shown in Figure G-5 above. The tons of excluded waste generated decreased from 7,200 in 2017 to 5,800 in 2020. There was a steep decline in waste generated from 2018 to 2019. It is possible this was the result of the COVID-19 pandemic as many jobs, such as construction, that produce a large amount of excluded waste were halted for health and safety concerns. The District saw a slight increase from 2019 to 2020.

B. Generation Projections

Year	Population	Residential/ Commercial				Industrial				
		Disposal (tons)	Recycle (tons)	Generation (tons)	Per Capita Generation (ppd)	Disposal (tons)	Recycle (tons)	Generation (tons)	Excluded Waste (tons)	Total (tons)
2020	53,830	40,719	8,914	49,632	5.05	5,458	47,767	53,225	5,843	108,700
2021	53,689	41,776	8,807	50,583	5.16	7,629	47,495	55,124	6,672	112,379

Year	Population	Residential/ Commercial				Industrial				
		Disposal (tons)	Recycle (tons)	Generation (tons)	Per Capita Generation (ppd)	Disposal (tons)	Recycle (tons)	Generation (tons)	Excluded Waste (tons)	Total (tons)
2022	53,548	42,776	8,809	51,585	5.28	7,586	47,224	54,810	6,672	113,067
2023	53,407	43,776	8,811	52,587	5.40	7,543	46,955	54,497	6,672	113,756
2024	53,266	44,776	8,813	53,589	5.51	7,500	46,687	54,187	6,672	114,448
2025	53,125	45,776	8,816	54,592	5.63	7,457	46,421	53,878	6,672	115,142
2026	53,890	46,776	8,823	55,599	5.65	7,414	46,156	53,571	6,672	115,842
2027	53,708	47,776	8,831	56,607	5.78	7,372	45,893	53,265	6,672	116,544
2028	53,526	48,776	8,828	57,604	5.90	7,330	45,632	52,962	6,672	117,238
2029	53,344	49,776	8,826	58,602	6.02	7,288	45,372	52,660	6,672	117,934
2030	53,	50,	8,	59,	6.14	7,247	45,113	52,360	6,672	118,631

Year	Population	Residential/ Commercial				Industrial				
		Disposal (tons)	Recycle (tons)	Generation (tons)	Per Capita Generation (ppd)	Disposal (tons)	Recycle (tons)	Generation (tons)	Excluded Waste (tons)	Total (tons)
	162	776	23	599						
2031	52,990	50,776	8,894	59,670	6.17	7,247	44,856	52,102	6,672	118,444
2032	52,818	50,776	8,894	59,670	6.19	7,247	44,856	52,102	6,672	118,444
2033	52,646	50,776	8,894	59,670	6.21	7,247	44,856	52,102	6,672	118,444
2034	52,474	50,776	8,894	59,670	6.23	7,247	44,856	52,102	6,672	118,444
2035	52,302	50,776	8,894	59,670	6.25	7,247	44,856	52,102	6,672	118,444
2036	52,186	50,776	8,894	59,670	6.27	7,247	44,856	52,102	6,672	118,444
2037	52,070	50,776	8,894	59,670	6.28	7,247	44,856	52,102	6,672	118,444
2038	51,954	50,776	8,894	59,670	6.29	7,247	44,856	52,102	6,672	118,444

Source(s) of Information:
Disposal from Appendix D
Recycled from Appendices E and F
Populations: Ohio Development Services Agency, "2010 to 2040 Projected Population for Ohio Counties - Summary 2010 to 2040 Projected

Residential/commercial waste is projected to increase by 1,000 tons per year. The increase projected is based on a steady rising trendline from historical data so that the increase in total tons is mainly due to this increasing projected generation. Diversion is projected to remain stable with the current recycling programs available increasing diversion slightly each year. Projections are flatlined after the seventh year of the planning period.

C. Waste Composition

Table G-3. Composition of Residential/Commercial Waste

Material	Percent of Total Generation [1]	2020	2021	2022	2023	2024	2025	2026	2027	2028
Paper and Paperboard	23.10%	11,465	11685	11916	12148	12379	12611	12843	13076	13307
Glass	4.20%	2,085	2124	2167	2209	2251	2293	2335	2377	2419
Ferrous	6.60%	3,276	3338	3405	3471	3537	3603	3670	3736	3802
Aluminum	1.30%	645	658	671	684	697	710	723	736	749
Other Nonferrous	0.90%	447	455	464	473	482	491	500	509	518
Plastics	12.20%	6,055	6171	6293	6416	6538	6660	6783	6906	7028
Rubber and Leather	3.10%	1,539	1568	1599	1630	1661	1692	1724	1755	1786
Textiles	5.80%	2,879	2934	2992	3050	3108	3166	3225	3283	3341
Wood	6.20%	3,077	3136	3198	3260	3323	3385	3447	3510	3571
Other	1.50%	744	759	774	789	804	819	834	849	864
Food	21.60%	10,721	10926	11142	11359	11575	11792	12009	12227	12443
Yard Trimmings	12.10%	6,006	6120	6242	6363	6484	6606	6728	6849	6970
Misc inorganic wastes	1.40%	695	708	722	736	750	764	778	792	806
R/C waste generated		49632	50583	51585	52587	53589	54592	55599	56607	57604

Material	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Paper and Paperboard	13537	13767	13784	13784	13784	13784	13784	13784	13784	13784
Glass	2461	2503	2506	2506	2506	2506	2506	2506	2506	2506
Ferrous	3868	3934	3938	3938	3938	3938	3938	3938	3938	3938
Aluminum	762	775	776	776	776	776	776	776	776	776
Other	527	536	537	537	537	537	537	537	537	537

Nonferrous										
Plastics	7149	7271	7280	7280	7280	7280	7280	7280	7280	7280
Rubber and Leather	1817	1848	1850	1850	1850	1850	1850	1850	1850	1850
Textiles	3399	3457	3461	3461	3461	3461	3461	3461	3461	3461
Wood	3633	3695	3700	3700	3700	3700	3700	3700	3700	3700
Other	879	894	895	895	895	895	895	895	895	895
Food	12658	12873	12889	12889	12889	12889	12889	12889	12889	12889
Yard Trimmings	7091	7212	7220	7220	7220	7220	7220	7220	7220	7220
Misc inorganic wastes	820	834	835	835	835	835	835	835	835	835
R/C waste generated	58602	59599	59670	59670	59670	59670	59670	59670	59670	59670

Source(s):
Percent of Total Generation: Advancing Sustainable Materials Management: 2018 Tables and Figures
Waste Generated: Table G-2

Table G-3 presents the residential/commercial waste generated totals from Table G-2 and the estimated percent of total generation by material. Using the quantities of waste generated and the estimated percent of total generation, each material is projected during the planning period. It is estimated that the total waste generated will rise by 1,000 tons per year through the planning period. Projections are flatlined after the seventh year of the planning period.

APPENDIX H

STRATEGIC EVALUATION

Appendix H. Strategic Analysis

The state solid waste management plan establishes recycling and reduction goals for solid waste management districts. At the time of the District's 2019 Plan Update, the 2009 State Plan was in effect. Ohio EPA adopted the 2020 State Plan in November 2019, making several changes to the goals that guide programming. The programs and strategies evaluated in this Appendix H, consider the changes, and offer opportunities where programs fall short in demonstrating compliance with the 2020 State Plan.

This Appendix is divided into thirteen (13) separate analyses or sections as directed in Format 4.1. The status of the reduction and recycling efforts were evaluated in the context of factors presented in the 13 analyses described in Format 4.1. Some of the more extensive sections are further subdivided, such as Section H-1.

The following table provides a directory for the analyses within Appendix H.

1. Residential Recycling Infrastructure Analysis

This evaluation of the District's existing residential recycling infrastructure determines whether the needs of the residential sector are being met and if the infrastructure is adequately performing. There are many materials that can be recycled. The District's waste management system relies on various collection systems and programs to divert materials from the landfill to be recycled. The residential recycling infrastructure consists of curbside programs, drop-off recycling programs, reuse centers, and thrift stores. The District's role instituting this network of available opportunities varies.

A. Curbside Evaluation

This evaluation analyzes the residential infrastructure to identify any service gaps and to further evaluate the performance and service costs.

The first metric analyzed is recycling collection infrastructure. Curbside recycling is available in 3 out of 12 communities. New London Village and Norwalk City both have non-subscription curbside recycling and Wakeman Village has subscription curbside recycling. New London Village and Norwalk City are both serviced by their City Sanitation Departments and Wakeman Village is serviced by Republic Waste Services.

The largest populated city, Norwalk City, provides curbside recycling to households, which accounts for 29% of the population of the District. Combined with the other two communities that provide curbside recycling options, roughly 20,000 residents, which is 38% of the population have access to curbside recycling. There is roughly 62% of the population that do not have options for curbside recycling.

Willard City, with a population of over 6,000 is the next largest city and an opportunity for curbside recycling. If Willard offered a non-subscription curbside recycling program, the population to access to curbside would jump up to approximately 49% of the population.

Huron County is predominantly rural, with 6.8% developed land a low population density of 118.7 persons per square mile. If curbside recycling service is offered, the challenge is higher per-household collection costs associated with the lower population density.

Another metric analyzed is total recyclables collected and pounds of recyclable materials collected per household.

Table H-1.1 Historical Curbside Recycling Recovery

Curbside Programs	2016	2017	2018	2019	2020
Tons reported in Non-Subscription (2 communities)	N/A	775	771	1,173	697
Tons reported in Subscription (1 community)	N/A	5.7	5.7	N/A	N/A
Total	**919**	**781**	**777**	**1,173**	**697**

Source of information: Huron County Annual District Reports (2016-2020)

Table H-1.1 shows the trends of curbside recycling from non-subscription and subscription communities. Over the 2016 to 2020 timeframe the diverted tonnage fluctuated. The largest decrease is seen between 2019 and 2020. The District believes this was largely due to the COVID-19 pandemic, many implications from that have caused large fluctuations in recycling trends across Ohio.

Table H-1.3 Curbside Recycling Per Household

Programs	Households	2020 Tons	Pounds / Household / Day	Pounds / Household / Year
City of Norwalk	6,952	697.18	0.55	198
Village of New London	867	67.76	0.43	154
Wakeman Village	225	5.7	0.14	50

Source of information: Huron County Annual District Reports (2016-2020)

Evaluation of the curbside recycling services per community is an important step in understanding how well the program is serving the community. **Table H-1.3** below shows the breakdown of the per capita recycling generated per household per day and per year.

In a study conducted by The Recycling Partnership, the surveyed communities average 440 pounds per household collected annually[1]. Comparatively the District's communities are collecting below the surveyed communities' average.

Table H-1.4 Benchmarked Rural Communities Curbside Recycling

Community	Households	Pounds / Household / Year
Yellow Springs Village (Greene County, Ohio)	1,945	558

[1] "2020 State of Curbside Recycling Report", The Recycling Partnership. https://recyclingpartnership.org/wp-content/uploads/dlm_uploads/2020/02/2020-State-of-Curbside-Recycling.pdf

Community	Households	Pounds / Household / Year
Wapakoneta (Auglaize County, Ohio)	4,037	325
Village of Loudonville (Ashland County, Ohio)	1,071	364

Source of information:
2020 Plan Update Greene County SWMD
2020 Plan Update Auglaize County SWMD
2018 Plan Update Ashland County SWMD

As shown in **Table H-1.4**, the District's curbside recovery is measuring less than the benchmarked rural community curbside communities. Implementing best practice education programs could help increase the per household recovery.

Yellow Springs Village in Greene County has the highest recovery per household of the benchmarked Districts. The primary driver behind the elevated recycling numbers is that Yellow Springs implements a pay-as-you-throw (PAYT) trash service. Residents of this community pay variable rates depending on how much trash is set to the curb. PAYT programs such as this provide strong economic incentives for residents to recycle as it makes recycling cheaper than trash disposal.

Similarly, Wapakoneta in Auglaize County also operates a PAYT waste disposal program in conjunction with non-subscription curbside recycling. Residents of this community also pay variable rates that incentivize recycling material over disposing of it.

The last community benchmarked, the Village of Loudonville in Ashland County, does not have a PAYT service. The village contracts with a hauler for weekly pick up of recyclables. The community sees high recycling per household because of its convenient single stream collection type. Single stream allows residents to put all accepted recycled materials into one cart or bin, without the need to separate the materials themselves. This is more convenient for residents than multi-stream collection and thus more people recycle.

B. Drop-Off Evaluation

The District directly services the drop-off recycling program. Historically a total of 18 full and part-time drop-offs are available. There were 6 full-time drops and 12 part-time drop-offs that were publicly available during 2020. Full-time drop-offs are open for at least 40 hours per week. Part-time drop-offs are available a few days each month. Most of the Drop-offs collected the same types of materials, which were, cardboard, mixed paper, steel cans, magazines, and office paper.

Table H-1.5 Recycling Drop-Off Sites

Drop-off	2017	2018	2019	2020
Full-Time	7	7	6	6
Part-Time	11	11	12	12
Total	**18**	**18**	**18**	**18**

Over the years, the drop-off program is consistent with minimal changes. **Table H-1.5** shows the historical four-year count of drop-off programs. In 2017 and 2018, one of the communities was identified on the annual district report as full-time, however, it has not changed the part-time availability and status.

Table H-1.6 Recycling Drop-Off Sites

	2017	2018	2019	2020	Average Percent Change
Tons Recovered	435	717	1,165	997	
Annual % Change in Tons Recovered		**64.8%**	**62.4%**	**-14.42%**	**38%**

Table H-1.6 calculates the drop-off tonnage trends from 2017 to 2020. The total recycling numbers for each year represent the combined total of all the drop-offs collected together. The average percent change shows a 38% increase in recycling from drop-off locations over the past 4 years.

Figure H-1.1 Drop- Off Recycling Trends

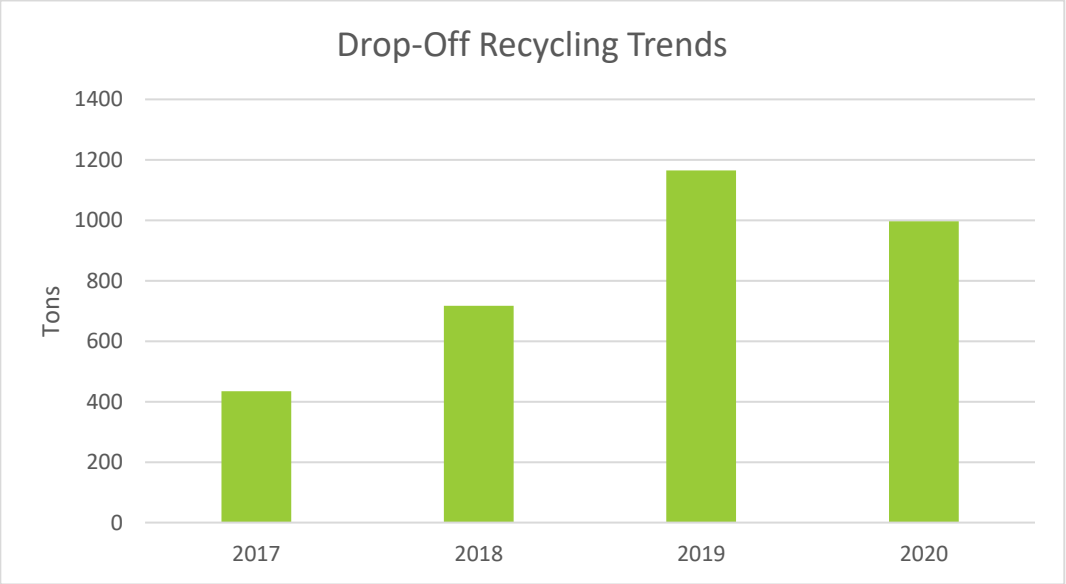


Figure H-1.1 shows the consistent trends of the recycling that the drop-off locations have recovered from 2017 to 2020. Tonnage peaked in 2019.

Table H-1.7 Benchmarked Drop-Off Programs

Solid Waste Management District	Cost per Ton for Service	Tons Collected	Per Capita Recycling (pounds per person per year)
Huron County[1]	$80.24	997	37
Lawrence Scioto	$170.25	1,566	23
Fayette Highland Pickaway Ross	$104.51	3,429	33

Note:
[1] Huron County cost per ton is based on the costs in 2020 for the District servicing the drop-off containers. In 2020, the District received $7,206 in revenues and are not factored into the cost for service.
Source:
Lawrence Scioto 2019 data obtained from the District.
Fayette Highland Pickaway Ross phone survey June 2020.

For comparison purposes, the District's program was normalized on a per ton or per capita level and compared to other rural programs in the State of Ohio as shown in **Table H-1.7**. In this demonstration, operational costs for the drop-off program do not include the costs for collection labor or fuel from the drop-off locations to the transfer station. Those costs are paid by the County Transfer Station budget and not the District budget. Normalizing programs shows cost per ton for service is less in Huron County than the other District's benchmarked. The District costs include hauling costs from the transfer station and recyclable processing tipping fees. The contracted hauler invoices the transfer station and then the transfer station invoices the District. The only other costs incurred by the District relative to this process are related to the ownership/ maintenance of the District owned truck and drop-off trailers.

The Transfer Facility is charged per pull that is incurred for transporting recyclables to the contracted processor. Owning the containers and operating a roll-off style program (more capacity) help keep costs lower for the District. The more capacity a container can hold the less frequently a site needs to be serviced. The District charges the townships a flat rate for recycling collection and processing.

Assuming the entire county population, the average pound per capita recovered in 2020 is approximately 37 pounds per person per year. The District is demonstrating more recovery per person in the drop-off program than the benchmarked Districts.

C. Conclusions/Findings

The District is averaging about an 18% residential/commercial diversion rate. One area to focus improvements is participation in the available opportunities. Education/outreach are a huge part of any programs success and also needs an evaluation for best practices. There are several methods to use to get the

information out about the recycling program: radio and tv spots, newspaper ads and articles, and billboard ads; visiting and giving presentations to neighborhood associations, schools, churches and civic organizations to promote and explain the program; issuing quarterly flyers, leaflets and/or newsletters in the water/sewer bill, bank statement or by separate mailing by the water/sewer department; training community volunteers on program so they educate neighbors and others; produce video on local waste management/recycling program; and displaying information booth on weekends at stores and/or food centers. Whatever the means of getting the information out, ensure that the material explains 1) what is being collected, 2) preparation instructions, 3) time and day when the materials will be collected, and 4) who to contact if you have questions. Simple, active language and simple line graphics in the printed material is very important. Continuous education is critical if the recycling program is to be successful.

Another area is collection - getting materials from generators to the MRF for processing. Curbside recycling is the most convenient and demonstrated higher return of per capita recovery. There is room for diversion to improve in the curbside programs. Beginning conversations and brainstorming between the District and the curbside community stakeholders would be a great start to exploring the recycling programs in reaching greater diversion. Additionally, the City of Willard, the second largest city in the District currently does not have access to curbside recycling, they have 3 different drop-offs that are located within the city but operate only part-time. The drop-off program is providing access to the residents and as demonstrated in this analysis is performing at a comparable cost of service. Improving drop-off recycling options for those that live in rural communities could yield higher recycling tonnages. With restrictive hours and certain drop-offs operating every other month, it’s not as convenient of an option for residents to recycle.

Another option to encourage diversion is to incorporating incentives for recycling such as variable rate garbage collection fees. Example: The household has the option of using a 30-, 60- or 90-gallon trash can, with the cost of service for each being $20, $30, and $40, respectively. If you recycle, you may only need the use of the smallest trash bin, thereby saving on your monthly trash disposal bill. The District could help communities perform rate analysis to determine costs for service and a rate schedule to encourage incentives.

Opportunities to explore as programs for this 2024 Plan Update:

- Curbside Recycling Technical Assistance (ongoing program) – Setting a goal to engage 1 curbside program a year, here are steps the District could implement.
    - Engage community stakeholders and determine the barriers they see in their curbside recycling programs.
    - Offer technical assistance (education, cost analysis, contract assistance, grant writing assistance, face-to-face meetings, etc.) to

seek third party grant funding to help overcome challenges. For instance, The Recycling Partnership offers grants for single stream curbside lidded carts. Additionally, Ohio EPA offers Community Grants which could be applied for curbside recycling programs.
    - Explore volume-based billing rate structures.
    - Conduct a community survey of citizens/households to build a baseline understanding of program understanding.
- Drop-off Program Improving Availability (ongoing program) – Strategize drop-off locations hours of availability, volume collected, and cost of service.
    - Engage community stakeholders with part-time locations to determine the interest in expanding to full-time.
    - Conduct a user study to determine household interest in more frequent availability.
- Education/Outreach (ongoing program) – Setting a goal to increase materials recovered per capita
    - Develop an outreach plan to encourage recycling.
    - Develop a resource guide to donating.
    - Develop a District social media outreach plan.
    - Use a variety of methods to reach different audiences including website, regular column entries in newspaper, cable, and television ads, press releases, and brochures.

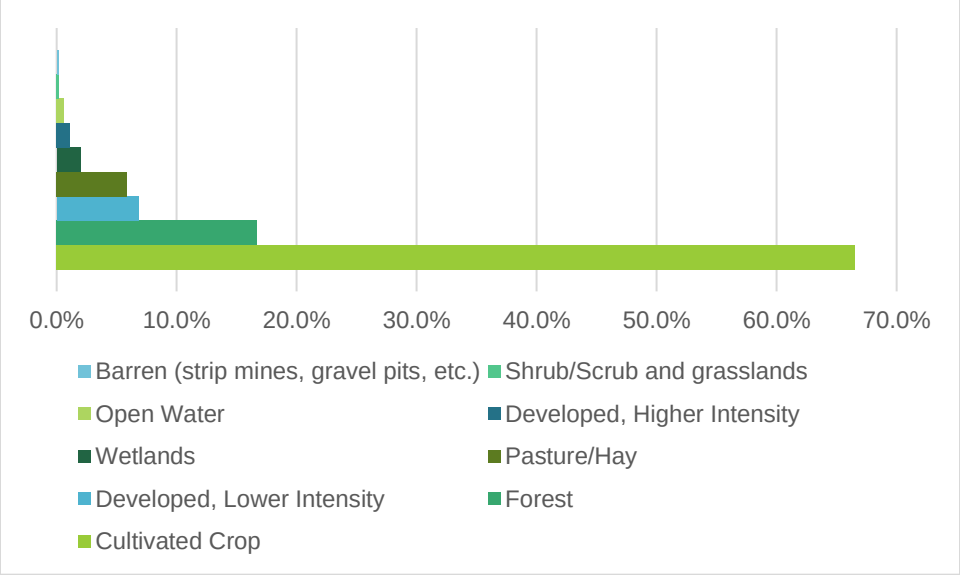
2. Commercial /Institutional Sector Analysis

This evaluation of the District's existing commercial/institutional recycling determines if existing programs are adequate to serve the sector or if there are needs that are not being met. The analysis conducted for this plan update evaluates the strengths and weaknesses of existing programs. The goal is to determine gaps and if there is more the District can do to address the commercial sector. The commercial/institutional sector within the District consists of the following (non-exhaustive list): commercial businesses, schools and universities, government agencies, office buildings, stadiums, amusement parks, event venues (stadiums, concert halls), hospitals and non-profit organizations.

A. Geographical

Defining rural and urban is based on decennial census criteria related to population thresholds, density, distance, and land use. In general, rural areas are sparsely populated, have low housing density, and are far from urban centers. **Figure H-2.1** shows 66% of Huron County's land use is cultivated cropland.

Figure H-2.1 Land Cover

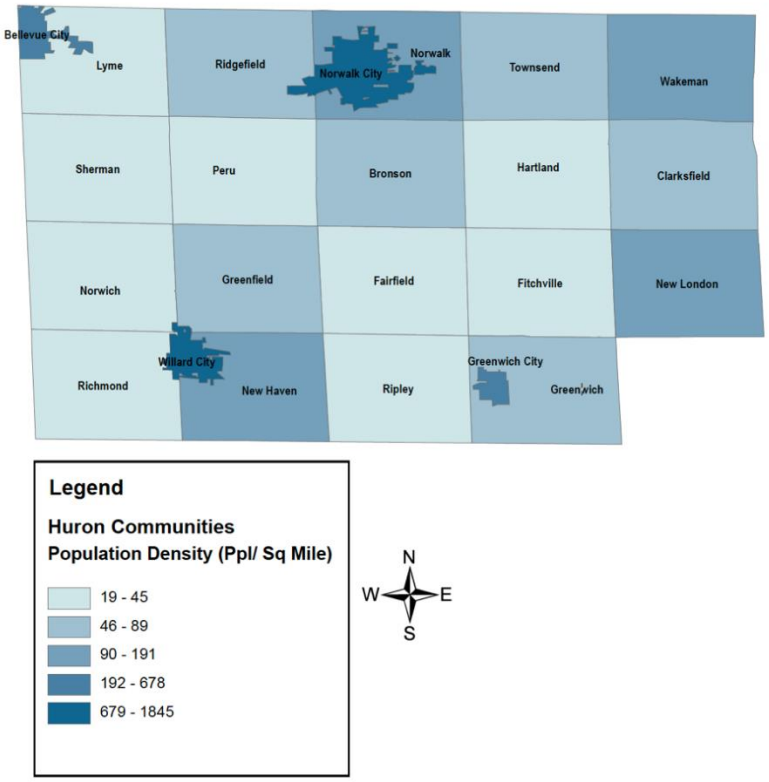


The population density is at of 118 persons per square mile (2019 Ohio County Profiles for Huron County, n.d.), where the more densely populated area is the City of Norwalk. The City of Norwalk sits at a population of roughly 17,000 residents and holds roughly 29% of the county population. The next more populated communities are the City of Willard at 11% and the City of Bellevue at 6%.

The City of Norwalk, the County seat, has the heaviest concentration of commercial businesses. Outside of Norwalk, the commercial basis is smaller with

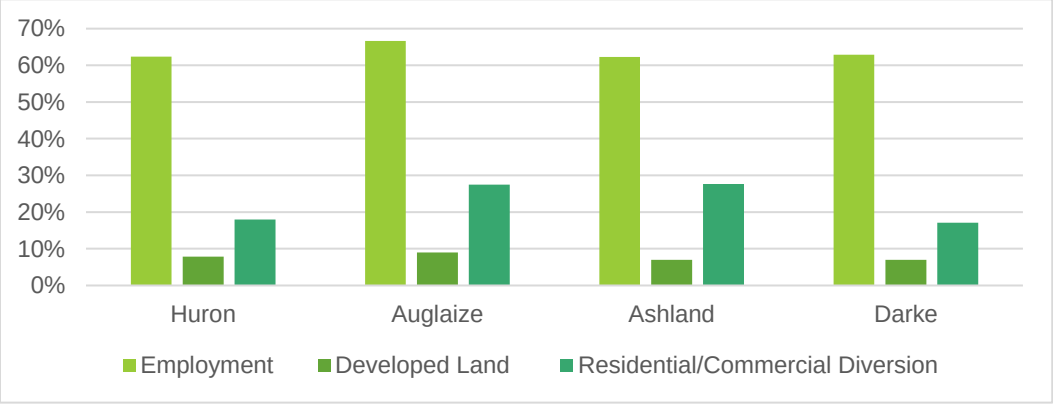
concentrated districts or parcels near Willard, villages, and township town centers.

Figure H-2.2 Population Density Map



For comparison, the District's employment, land use, and residential/commercial diversion rates were compared to three other rural single county solid waste districts. **Figure H-2.3** below shows the comparison. Across all four SWMDs they are all very closely matched for employment rates and percentage of developed land. Auglaize and Ashland County both have roughly a 10% higher diversion rates than both Darke and Huron.

Figure H-2.3 Correlation with other SWMD

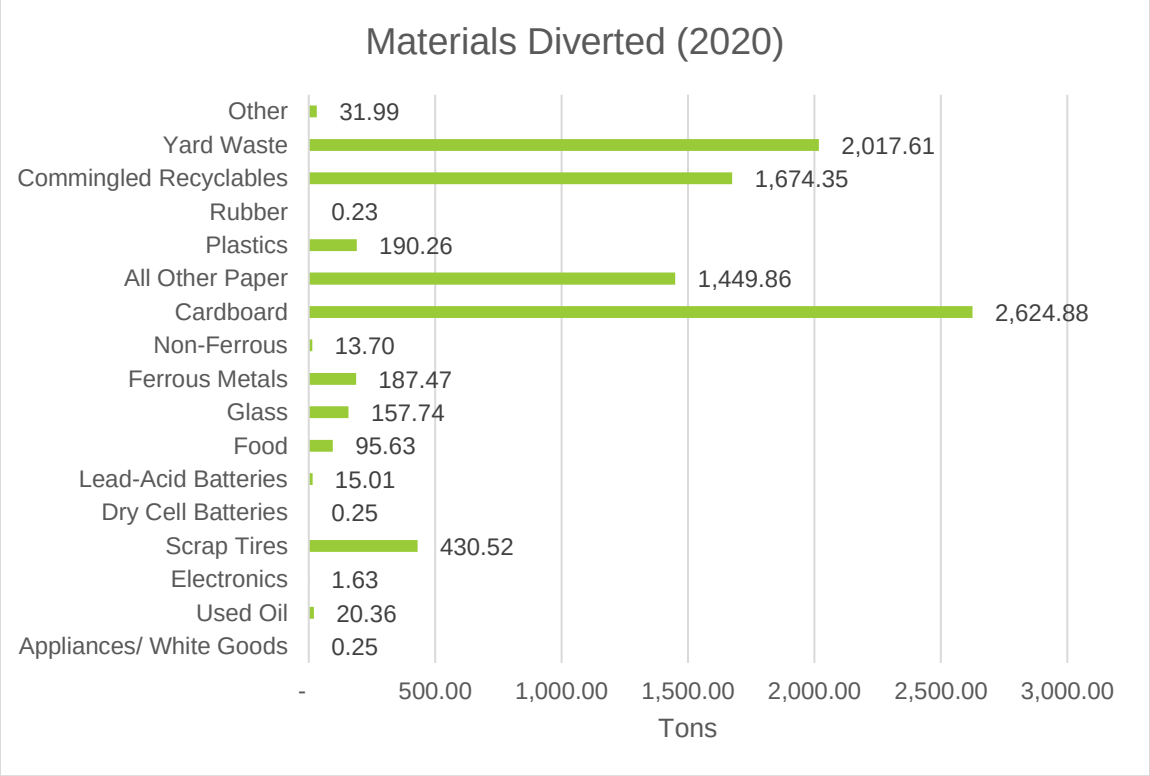


In this comparison the District researched Auglaize and Ashland's solid waste district plans to gather any best practices they may be implementing towards the commercial sector resulting in a higher diversion rate. In Auglaize, the District provides direct collection service to schools, government, and other commercial businesses as well as a container loan program for special events. Also, yard waste composting represents the most diverted material based on weight. In Ashland, the District received higher volumes of materials reported from a processor. Neither Auglaize nor Ashland identified best practices in their programming to target commercial businesses.

B. Diversion

Figure H-2.4, graphs the residential/commercial diversion in the 2020 reference year. The most notable materials diverted are cardboard, yard waste, and commingled recyclables.

Figure H-2.4 Huron County Materials Diverted



Tracking and reporting of residential and commercial recycling makes separating commercial data from residential data challenging. Measurables obtained from this sector include recorded diversion data obtained from commercial surveys, brokers, haulers, and Ohio EPA sourced data from commercial businesses and material recovery facilities (MRFs).

Table H-2.1 Estimated Commercial Stream Recycling (2020)

Source of Commercial Recycling Data	Quantities (Tons)
Commercial Survey	2,092
Ohio EPA Commercial Data	1,422
Data from other Recycling Facilities	2,088
Total	**5,602**

Using this method for estimations, calculates roughly 63% of diversion is attributed to the commercial sector.

C. Commercial/institutional Establishments

The top sectors for employment for Huron County are manufacturing, health care and social assistance, and retail trade[2]. While the county documents a decline in manufacturing employment since 2004, manufacturing continues to be the top employer industry. Excluding manufacturing, health care and social assistance, and retail trade employ a good number of people in the county and have a large share in the number of businesses.

Table H-2.2 Commercial/Institutional Establishments

NAICS Code	NAICS Description	Number of Commercial/Institutional Establishments
42	Wholesale Trade	41
44-45	Retail Trade	152
48-49	Transportation and Warehousing	33
51	Information	24
52	Finance and Insurance	71
53	Real Estate and Rental/Leasing	37
54	Professional, Scientific, and Technical	70
55	Management of Companies and Enterprises	0
56	Administrative and Support and Waste Management and Remediation Services	42
61	Educational Services	9

[2] Ohio Department of Job and Family Services Office of Workforce Development. Ohio Economic Profile Huron County. July 2021.

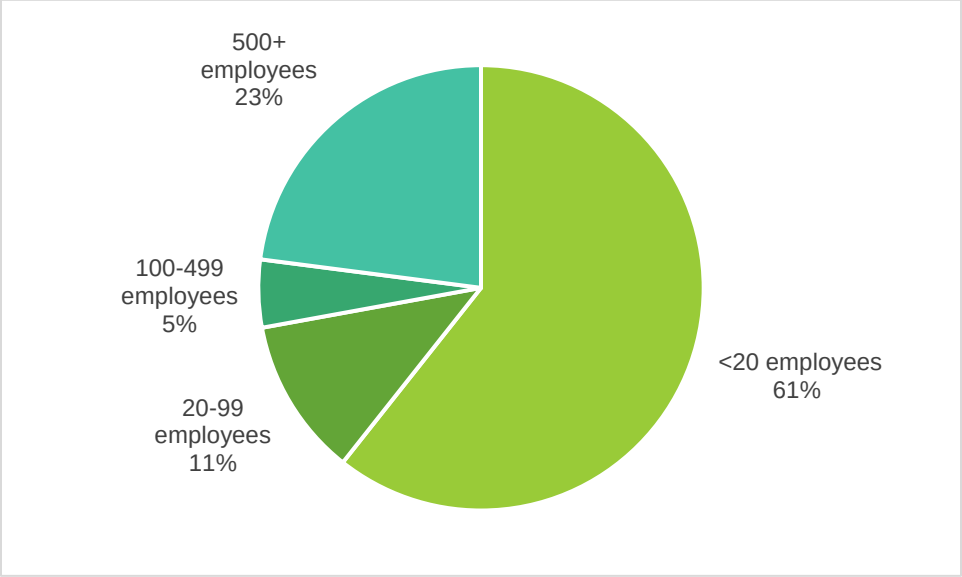
NAICS Code	NAICS Description	Number of Commercial/Institutional Establishments
62	Health Care and Social Assistance	102
71	Arts, Entertainment, and Recreation	11
72	Accommodation /Food Service	112
81	Other Services (Except Public Administration)	154
	Total	858

Source: *2019 County Business Patterns. U.S. Census Data.*

There were roughly 858 commercial/institutional establishments in Huron County during the reference year 2020. **Table H-2.2** shows the number of commercial/institutional establishments within the North American Industry Classification System (NAICS) code.

Commercial sector recycling programs are a big challenge for the District. Recycling is not mandatory and there is a cost for service. Figure H-2.5 shows that in the retail trade sector, more than 61 of the businesses have less than 20 employees. Other challenges besides cost of service are being able to connect with these small businesses to implement programs.

Figure H-2.5 Huron County Retail Trade By Enterprise Size



D. Functionality

Commercial businesses, schools and universities, government agencies, and event venues all rely on private sector haulers for their recycling programs. Businesses can request recycling services from local brokerage companies. The District keeps an updated list of local haulers that provide recycling services. The haulers will then transport the diverted materials to material recovery facilities where the material will then be processed to sell to manufacturers. The District offers free waste audits and assessments to commercial businesses upon request. This is not advertised on the District's website or through any other platform at the District. There were no waste audits that were performed during 2020.

Events/Venues and Parks

Recycling in public spaces such as parks and event venues is currently a gap for the District. The District's number of parks is rather small and not a major priority currently for focusing diversion tactics.

Commercial Businesses

Commercial businesses have the opportunity to contract with a private hauler for recycling services. The District provides businesses with the option to have a waste audit of their facility performed. This is a program that the District has not advertised widely among the commercial businesses.

Schools and Institutions

There are six different school districts within Huron County. The District works with these school districts to provide education on recycling and environmental education to the students. However, this service was temporarily unavailable in 2020 due to COVID-19 restrictions.

The District provides weekly service to the following schools in the City of Norwalk: Norwalk Middle School, Main Street School, League Street School, and Norwalk High School. Limited material drop-offs were available at New London High School and Western Reserve High School. New London High School collected mixed paper and metal cans; Western Reserve High School collected paper and cardboard.

Not all schools are recycling which is a great opportunity for pursuing programs. Education in the schools that have programs is an area of opportunity to educate the students on the correct materials to recycle.

Government Agencies and Office Buildings

Many of the government offices in Huron County serve as recycling drop-off collection sites. There are part time drop-off locations at Bronson Township Hall, Richmond Township Hall, New Haven Township Hall, and Wakeman Township Hall as well as a full-time location at the Huron County Administration Building. An opportunity for the commercial sector is to connect with these administration buildings to help set internal recycling procedures and protocols for employees working in the buildings.

E. Conclusions/Findings

Commercial sector participation in recycling programs is challenging mainly due to cost of service and that recycling is voluntary.

Opportunities to explore as programs for this 2024 Plan Update:

- Waste Audits (ongoing program) - Continue to offer waste audits. Increase the education/outreach efforts associated with this program to help make local businesses aware of the opportunities offered.
    - Instead of relying on commercial businesses to contact the SWMD, actively commit to reaching at least 3 businesses a year to conduct a waste audit, help set up recycling programs, etc.
    - Social media posts targeted at businesses
    - Adding resources to District website for commercial and industrial businesses
    - Explore private sector partnerships
- School and Institution Outreach (ongoing program)
    - Target working with remaining school districts that do not have recycling programs in place already. Target audience is top management level within the school district. Continue to provide in-school large area recycling receptacles to existing school participants.
- Business and Industry Outreach (ongoing program) - Develop educational materials for businesses such as how to set up a recycling program.
- Government Office Buildings
    - Many government office buildings serve as drop-off locations. District could set internal recycling procedures and protocols for employees working in the buildings.

3. Industrial Sector Analysis

The analysis of the industrial sector determines if existing programs offered through the District are adequate to serve that sector and determine if additional programs are needed to support the manufacturing entities.

A. Evaluation

There were approximately 170 industrial businesses operating in Huron County during the reference year (2020). Most of the industrial establishments operate out of one location. A large portion of the industrial businesses in Huron have less than 10 employees. **Table H-3.1** lists the top employed industrial businesses in Huron County by employee size.

Table H-3.1 Top Industrial Companies

Company	Employee Size
LSC Communications	1600
MTD Products Inc	900
Pepperidge Farm	560
Berry Global	390
Norwalk Furniture	175
Bunge Grain	170
Bunge North America	150
Midway Products Group Inc	150
Lakepark Industries Inc	130
MCPP Americas	115

Source: *U.S. Business Database. Rep. Reference USA. Web. 1 August 2022*

The District's industrial sector businesses are largely concentrated in the city of Norwalk (86 out of 170). The top five communities with the largest presence of industrial businesses are listed below in **Table H-3.2.**

Table H-3.2 Largest Industrial Communities

Community	Number of Industries
Norwalk	86
Bellevue	21
Willard	18
Greenwich	10

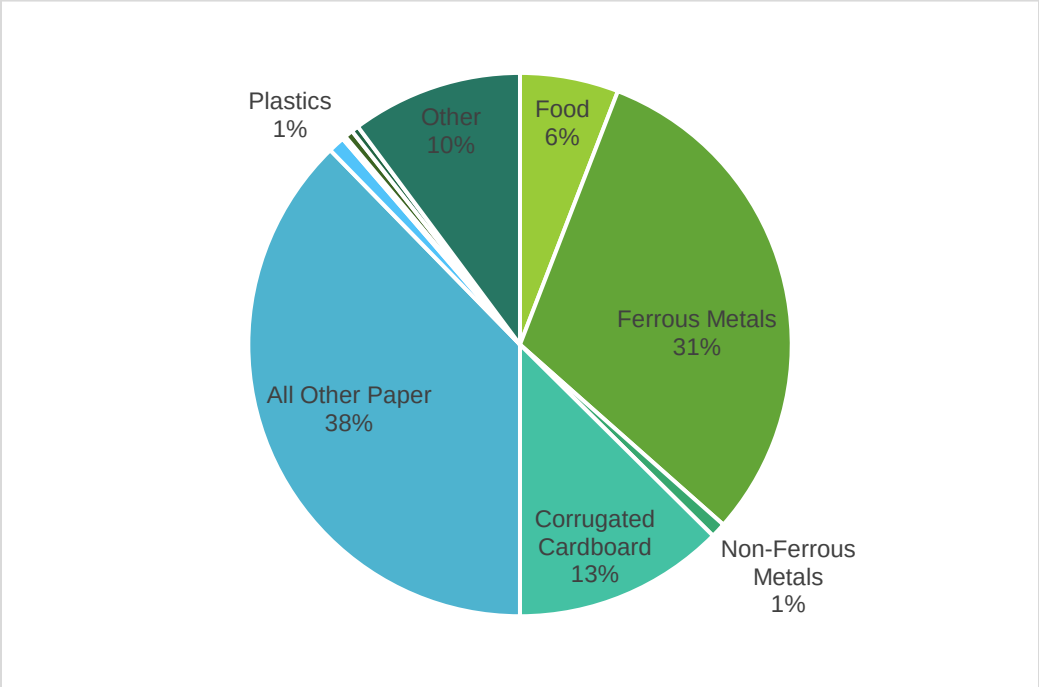
Source: *U.S. Business Database. Rep. Reference USA. Web. 1 August 2022*

B. Landfill Diversion

In 2020, industrial businesses recycled approximately 47,542 tons of waste. Industrial businesses diverted 90% from the landfill. The tons of industrial waste

recycled, including the types of materials recycled, are discussed in more detail in the section "*Diversion Analysis".* **Figure H-3.1** provides the percentage of each type of recyclables recovered during the reference year. All other paper comprises most of industrial sector recyclables at 38%, while ferrous metals is at 31%, and cardboard at 13%.

Figure H-3.1 Industrial Sector Recyclables



The information listed above is gathered from almost entirely through voluntary disclosure by the industrial businesses in Huron County. The District sends out surveys to their industrial sector requesting information about internal diversion numbers.

There are some challenges faced when gathering information voluntarily. Mainly, as there is no requirement, many industries do not report recycling totals to the District. The District received 18 survey responses from industrial businesses in the reference year. The District conducts these surveys annually and has remained between 15 and 18 respondents over the last three years.

Most of the recycling programs implemented by the industrial sector were implemented internally by the respective business without intervention from the District. However, should industries choose to request support, the District has existing programs that would be able to help. Engagement with this sector is challenging because much of the waste generated is specialized and specific to the business. Many businesses operate with proprietary information that they do not wish to disclose to the District in the annual surveys.

However, the District does have the Ohio EPA Materials Marketplace link listed on their website to help industrial businesses find markets for recyclable commodities. The District also currently has an active industrial representative on the Policy Committee board.

The industrial sector demonstrates a 90% diversion rate which is captured through the data collection efforts. Fortunately, the industrial sector business model incorporates recycling and reduction of waste.

C. Conclusions/Findings

The businesses who choose to report their diversion information were able to divert 90% of the waste generated in the reference year. The District has been able to maintain a steady amount of survey respondents over the last five years, but the 18 respondents is a small amount of the total industrial businesses operating. The industrial sector is not a focus for the District in this next plan update.

Opportunities to explore as programs for this 2024 Plan Update:

- Data Collection Efforts (ongoing program) - Obtain and maintain updated contact information for staff managing the industrial recycling programs and build a repour in hopes to attain yearly responses. Continue to promote and advertise annual survey participation.
- Business and Industry Outreach (ongoing program) Connect with local businesses and economic partners to determine the desire for materials management and reporting.

4. Residential/Commercial Waste Composition Analysis

This evaluation of the SWMDs waste composition analysis describes and evaluates the waste that makes up the largest portions of the waste stream. It also describes what programs are currently being used by the District to address the waste streams and what programs should be evaluated to further address the waste stream.

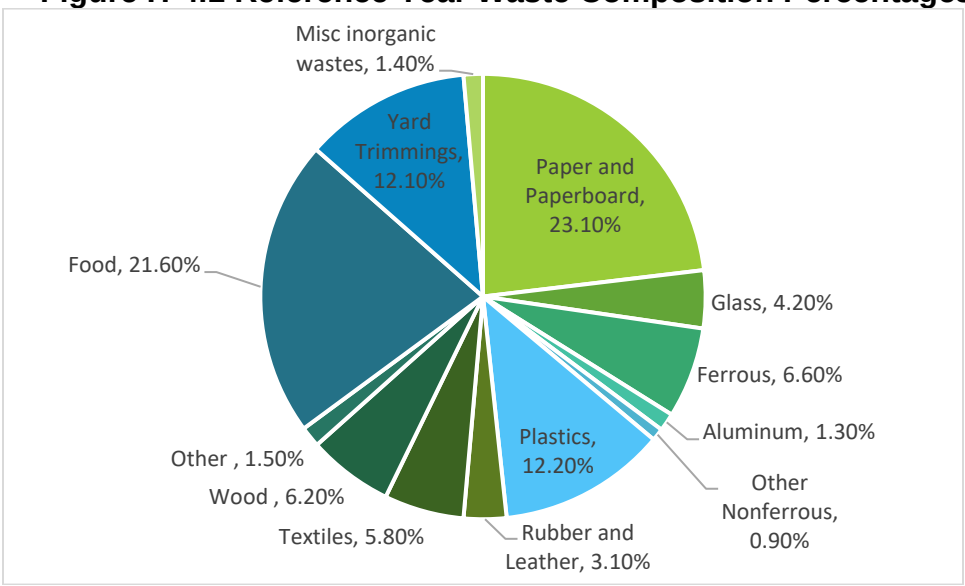
A. Residential/Commercial Sector

Waste Generation = Total Wastes Disposed + Total Wastes Diverted

The District generated 49,632 tons of residential/commercial waste in the reference year, and it recycled 18% of this waste. The historic average diversion for the four prior years to the reference year (2016-2019) was 19%. In the reference year roughly 82% of the total generated waste was sent to a landfill. To better understand the composition of the material not being diverted (the amount being landfilled), waste characterization data from the Ohio EPA was applied to the district's 40,719 tons disposed.

As discussed in Appendix G, an analysis of the estimated composition of residential/commercial waste was conducted for the reference year using the EPA's Advancing Sustainable Materials Management: 2018 Trends and Figures report. This report detailed the EPA's estimates for the composition of waste that was disposed of in landfills. The District used this report and assumes the percentages listed for its own estimations and projections. **Figure H-4.1** below lists the estimated waste composition for the District in the reference year.

Figure H-4.1 Reference Year Waste Composition Percentages

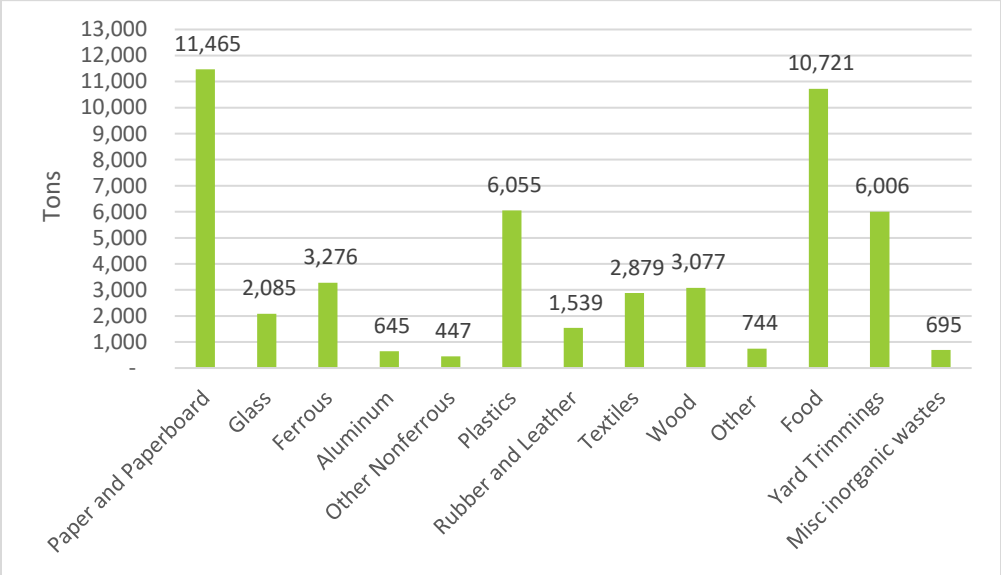


Source(s): U.S EPA, Advancing Sustainable Materials Management: 2018 Tables and Figures

As seen above, the major contributors to waste generation in the reference year are paper and paperboard (23%), food (22%), yard trimmings and plastics (12%). By assessing the composition of material landfilled, the District can evaluate which materials to target for increased diversion efforts. For example, as shown in Figure H-4.1, the top categories of paper, food, yard trimmings, and plastic are all able to either be recycled or composted instead of thrown into landfills. Some plastics may be more difficult to recycle without proper infrastructure. Note the "other" stream is typically comprised of hard to recycle materials such as electronics.

Figure **H-4.2** below shows the breakdown of waste composition by weight.

Figure H-4.2 Reference Year Waste Composition by Weight



Source(s): U.S. EPA, Advancing Sustainable Materials Management: 2018 Tables and Figures

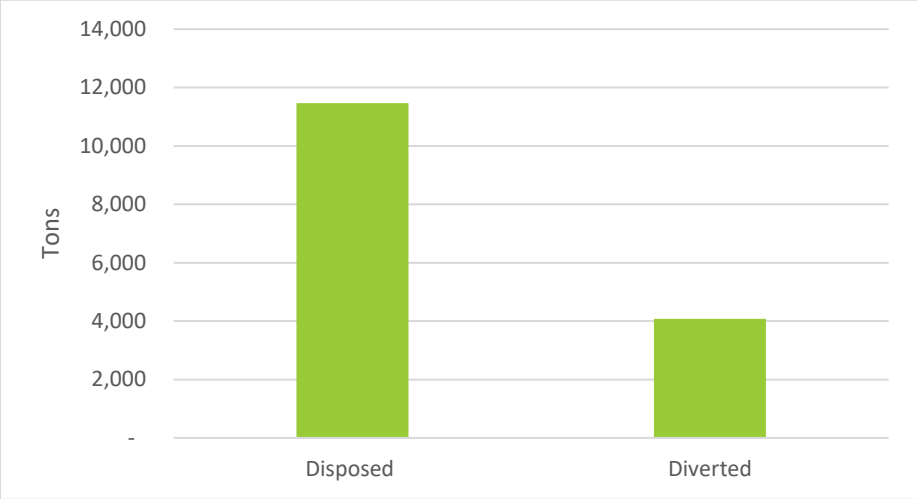
Paper and Paperboard Waste Stream

Using the waste estimates described above, the 23% of paper and paperboard in the overall waste composition results in about 11,456 tons of paper being generated. The District diverted 4,074 tons of paper and paperboard in the reference year, a 35% diversion rate for this material category. While this is encouraging, the District has the potential to divert even more. According to the American Forest and Paper Association, the U.S. recovery rate for paper and paper board was approximately 68% in 2018.

Figure H-4.3 below shows the amount of paper and paperboard disposed of in landfills and diverted. The residents of the District have sufficient access to paper and paperboard recycling opportunities. The District operates 6 full time drop off sites and 12 part time drop off sites year-round for residents. These drop off sites accept newspapers and inserts, magazines, catalogs, junk mail, envelops, phone

books, paper grocery bags, cereal, and snack boxes (paperboard), cardboard and clean pizza boxes. The major issues with these sites are getting residents to participate and dropping off their recyclable waste as well as educating residents how to use them properly/ what is and is not accepted.

Figure H-4.3 Paper and Paperboard Disposed versus Diverted



Source(s):
U.S. EPA, Advancing Sustainable Materials Management: 2018 Tables and Figures
Appendix E

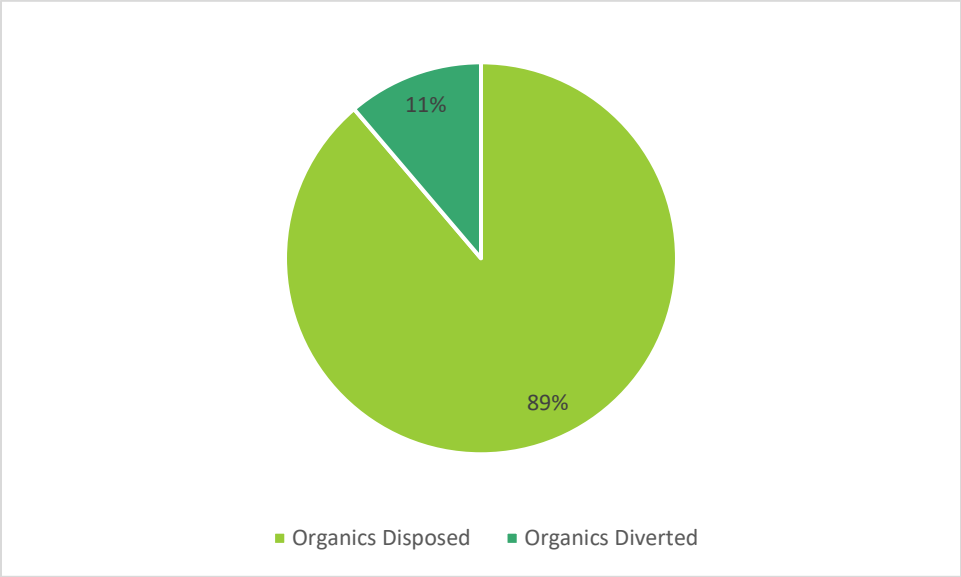
Food and Yard Waste Stream

Using the waste composition estimates above, there is approximately 10,721 tons of food waste and 6,006 tons of yard waste being generated annually by the District. The District generated a total of approximately 16,727 tons of organic waste. One issue with yard waste disposal is that many residents manage their yard waste at the curb and if this waste gets mixed with household waste, both categories will be disposed of at a landfill.

Figure H-4.4 shows the breakdown of the total organic waste disposed and the total organic waste diverted. Approximately 13% of total organic waste was diverted while 87% was landfilled. Of the diverted organic waste, 96 tons were from food diversion and 2,018 tons were from yard waste diversion.

Less than 1% of the total food waste was diverted in the reference year while approximately 33% of the total yard waste was diverted. The District has an opportunity to increase food waste recovery by encouraging and educating residents to compost their food waste. Residents with at home composting systems for food waste does not get tracked or recorded. As such, the data does not reflect this and could be inaccurate to the true food diversion.

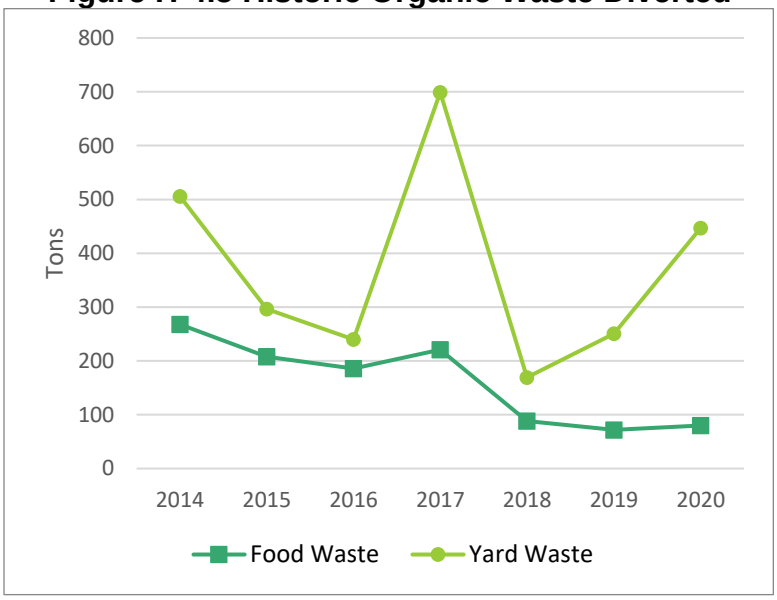
Figure H-4.4 Organic Waste Disposed and Diverted



Source(s): U.S. EPA, Advancing Sustainable Materials Management: 2018 Tables and Figures Appendix E

The District reported the use of four Class IV composting facilities in the reference year. These facilities, listed in Appendix B, diverted a total of 527 tons of organics in the reference year.

Figure H-4.5 Historic Organic Waste Diverted



Source(s): Ohio EPA Compost Facility Planning Report for years 2014, 2015, 2016, 2017, 2018, 2019, 2020

As can be seen in **Figure H-4.5** historical organic waste diverted has fluctuated over the last few years. This mainly lies with a pattern of large increases followed by large decreases in the amount of yard waste diverted. Food waste diverted decreased from roughly 270 tons in 2014 to 80 tons in the reference year (2020).

Yard waste is seasonal, weather dependent and variable. Yard waste diverted reached a peak of about 700 tons in 2017 and then was immediately followed by a low of 170 tons. However, yard waste diversion has seen two consecutive years of increased tons diverted. Fluctuations in yard and food waste diversion result from compost operations reporting (not all report annually) as well as the seasonal weather patterns.

Additionally, Huron County is a rural District. It is common in rural Districts for residents to practice backyard composting for disposal of organics and yard waste. This type of composting is not able to be tracked and could be part of the reason why the District has seen variable yard waste diversion in recent years.

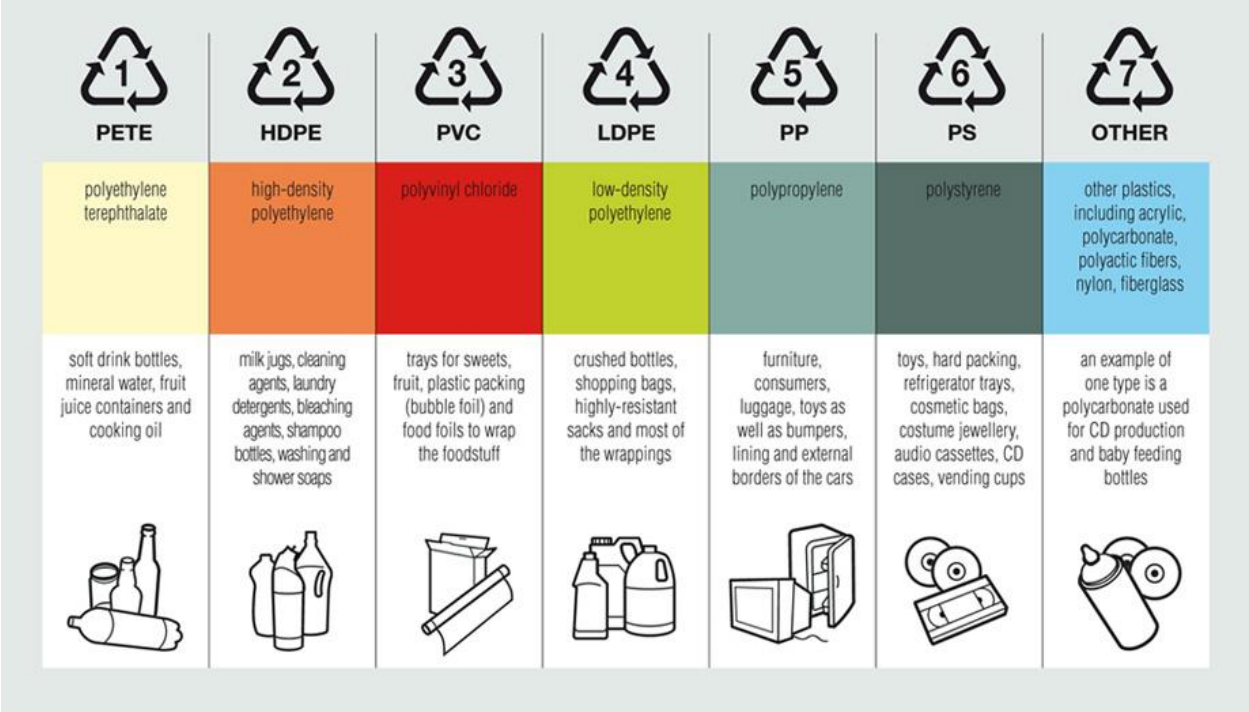
Best practices for diverting yard waste are to operate curbside recovery services, provide drop-off containers specifically for yard waste, provide clear and easily digestible information on what is accepted on the website and social media, and focus education/outreach practices towards this waste stream.

Plastic Waste Steam

Residential/commercial estimated waste composition expects plastics to be one of the larger percentages of waste streams being landfilled. Based on the waste composition, 6,055 tons of plastics were generated in the reference year.

The District accepts polyethylene plastics with a resin code of #1 or #2 at drop off recycling locations. These materials include plastic bottles and containers for soda, water, milk, shampoo, conditioner, and other similar bottles. **Figure H-4.6** describes the various types of resin codes for plastics below.

Figure H-4.6 Plastic Resin Codes



Source(s): Polychem USA

Plastic resin codes may confuse residents as they do not describe if something is recyclable and/or accepted in the area, they only relate to the type of plastic the item is made of. More recent packaging has #1 and #2 in different shapes, what are called non-bottle and rigids. Material recovery facilities do not always have end markets to sell the various resin grades. The District should monitor the recycling collected at drop off sites and determine the level of plastic contamination and the most common items that are mistakenly recycled.

B. Conclusions/Findings

The District's estimated waste composition data reveals that there are opportunities to increase diversion rates for paper and paperboard, organic waste, and plastic waste. The District diverted about 18% of the total residential/commercial waste generate in the reference year. Below the state goal of 25%. The District has adequate resources and infrastructure to reach the stated goal. Because of this, the District could focus on education and advertisement.

Opportunities to explore for this 2024 Plan Update:

- Public Awareness (ongoing program) - Develop District media presence such as social media posts, flyers, advertisements, or radio to increase knowledge of existing programs and locations.

    - Increase signage at recycling locations with what is acceptable versus not.
    - Send out mail describing in easy-to-understand language what is recyclable. and what is not recyclable to all residents.
- Continue to offer workshops and training services throughout the District.
- Improve and Promote Website (ongoing program) – Add education regarding yard waste and food waste diversion methods on the webpage.

5. Economic Incentive Analysis

Economic incentives are designed to encourage participation in recycling programs. In accordance with Goal 7 of the 2020 State Solid Waste Management Plan, the SWMD is required to explore how to incorporate economic incentives into source reduction and recycling programs.

A. Evaluation

Economic incentives in waste and recycling are offered to influence behavior. Typical economic incentives include rebates, rewards, grants (not a direct incentive for households), volume-based fee structures, etc. The majority of SWMDs offering economic incentives in the state either tie the amount recycled to some sort of financial compensation or reduce the cost of recycling compared to trash. A few SWMD's structure their economic incentives to address gaps in the waste management infrastructure. For instance, Jefferson Belmont Regional Solid Waste Authority designed economic incentives to address litter, closing the recycling loop, developing end markets, and recycling collection. These types of economic incentives incentivize the community or political jurisdiction rather than the household.

The City of Norwalk's waste and recycling collection system has volume-based components, but it is not operated as a true pay-as-you-throw (PAYT) style program. Each week, residents are permitted to set out an unlimited quantity of recycling and up to 3 cans or bags of waste per household. Cans or bags of waste cannot exceed 33 gallons in size or weigh more than 40 pounds each. Stickers must be placed on each bag of waste that exceeds the three bag/can limit and bulky items. Stickers for excessive waste cost $3.00 and bulky large item stickers cost $10.00. The City also picks up to 2 cans of yard waste.

For a PAYT program to be effective it should be clear that the more trash a resident throws away the more it costs. The question is whether more diversion can be achieved if the City re-examines their fee structure. Conducting an evaluation of the fee structure would determine performance.

The District offers a Punch Card system as an alternative to curbside trash and recycling service in the townships. Bronson, Clarksfield, Fitchville, Greenfield, Hartland, Norwalk, Ripley, and Townsend Township households can drop off up to a certain number of times a year. This program is not dictated by the District. The Townships created the program, and the District cooperates with the Townships to facilitate the program. Each township operates their own program for their residents, and each township provides a different number of free waste and recycling drop offs annually at the District's transfer facility. Recycling drop-off is free. Once the free punch card visits are used, the households recycling more will have a lower gate fee charge at the

transfer station. In the past, the Townships used to have once a month pickup but decided to cut out the middle person and haul materials themselves.

The program is designed for both bulk and general trash service. There are eight townships participating but the District is unable to obtain reliable household estimations for usage.

B. Conclusions/Findings

PAYT fee structures are proven to incentivize households to divert more for a lower cost of service. PAYT systems could be expanded to other communities in the District. The City of Norwalk could also consider an evaluation of their fee structure is performing as desired.

Educating and showing households how recycling more will impact their waste disposal charges could improve diversion efforts.

6. Restricted and Difficult to Manage Waste Streams Analysis

Goal 6 of the 2020 State Plan requires solid waste management districts to provide strategies for managing materials that are difficult to dispose of such as scrap tires, yard waste, lead-acid batteries, household hazardous waste, and obsolete/ end-of-line electronic devices. This analysis evaluates the SWMD strategies and considers other materials and programs for hard to manage waste.

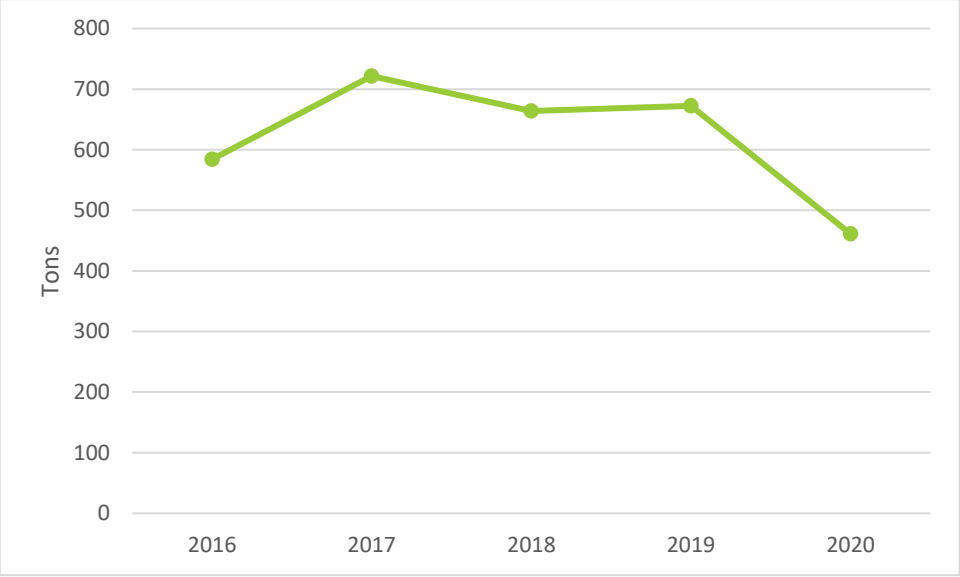
A. Evaluation

Scrap Tires:

The Ohio EPA estimates that more than 12 million scrap tires are generated in the State of Ohio every year. When not properly disposed of, these often end up in illegal dumps that creates hazards to public health and the environment. The number of tires and cost associated with managing them can be challenging to track and properly manage.

The District acquires scrap tire data from two sources, collection events and commercial survey results. In the reference year, the District received a total of 461.18 tons of scrap tires. The District directly handled nearly 31 tons (7%) through scrap tire collections at the Transfer Facility. The District provides permanent scrap tire collection for a fee at the Huron County Transfer Facility. The Huron SWMD website lists a fee between $4.00 and $35.00 depending on the type of tire.

Figure H-6.1 Historic Scrap Tire Diversion



Source(s): Annual District Reports 2016 – 2020

The District manages scrap tires throughout the year at the transfer facility as well as at any District run collection events. The last collection event

was in 2017, contributing to the five-year high that year of 721 tons. Collection events are held when grants are received. Additionally, commercial businesses such as automotive shops and service centers often take used tires for a tire fee.

Figure H-6.1 above demonstrates a decline in the historical scrap tires collected. 2016 to 2017 was the only year that resulted in an increase in tons collected. Since then, every year has seen a decline in tons collected. 2020 had the steepest decline, down 211 tons from the previous year. The data above is representative of collection events by the District, commercial businesses, and industrial businesses. With the downward trend of tonnage, it's suspected that households and farmers may be holding their scrap tires until the District is able to host another collection event to avoid the Transfer Facility per tire fees.

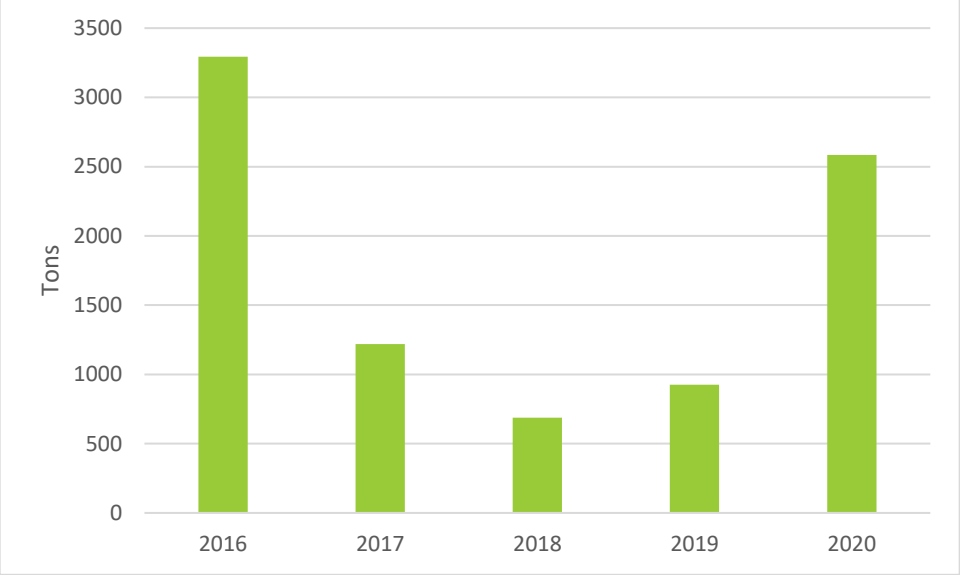
Infrequency of collection events is not helpful for tracking program performance and developing trendlines for analysis.

The District's website provides the location of the transfer facility accepting scrap tires as well as detailing the cost associated with the disposal of each type of tire. One addition the District could look to provide going forward is a list of locations outside of the transfer facility, such as automotive shops, that accept scrap tires within the District.

Yard Waste:

As shown in **Figure H-6.2** below, the historic yard waste diverted has seen major fluctuations. Beginning with a high of nearly 3,300 tons in 2017, the District saw major decrease in 2017 through 2019 before seeing a significant increase in 2020 to nearly 2,600 tons. The decrease seen in 2017 to 2019 stem from the residential/commercial survey results. Yard waste is seasonal and variable, but it is possible that businesses collecting yard waste stopped reporting to the District. The data below is reflective of three sources, the District collection at the Transfer Facility, residential/commercial survey, and the industrial survey.

Figure H-6.2 Historic Yard Waste Diversion



The District Transfer Facility holds a Class IV (yard waste) facility but is only used as a collection site. The yard waste dropped off here gets sent to a third-party composter. In the reference year, the yard waste collected at this site was sent to Barnes Nursery in Erie County. Fees are subject to change, in the reference year, $20.00 per ton for yard waste was charged, which is cheaper than the fee to landfill.

The District has two cities that offer yard waste collection programs, the City of Norwalk, and the Village of Wakeman. The City of Norwalk collects resident yard waste on the same day as trash service. Residents are allowed two cans per household and the cans are up to 33 gallons. Yard waste placed in bags or boxes is taken as trash. The city operates a yard waste facility on a seasonal schedule.

Other communities and businesses operate Class IV facilities throughout the District such as the Village of New London (112.2 tons), Village of Greenwich (87.4 tons), Sand Road Enterprises (185.3 tons), and Corso's Perennials (62.04 tons) in 2020.

Based on the projected waste composition completed in Appendix G, an estimated 4,927 tons of yard waste was generated in 2020. Only 2,583 tons of this waste was diverted by the District. It is estimated that 48% of yard waste was landfilled in the refence year.

Batteries

In 2008, regulations prohibiting the disposal of lead-acid batteries became effective. These batteries have a high recyclability value and Ohio has a retailer take-back law in place. The District accepts batteries at the

transfer facility at no cost, a total of 1.13 tons of batteries were accepted here in the reference year. The District also maintains a list of facilities that accepts batteries in the District and promotes / educates residents on where to bring batteries for recycling.

To better promote battery recycling within Huron County, the District could include the list of facilities and businesses referenced above and the contact information on their website. The District should also include on their website the ability to recycle dry-cell batteries. At the time of this report, the District does not include batteries on their list of acceptable materials at the transfer facility on their website.

Figure H-7.3 Historic Battery Recycling

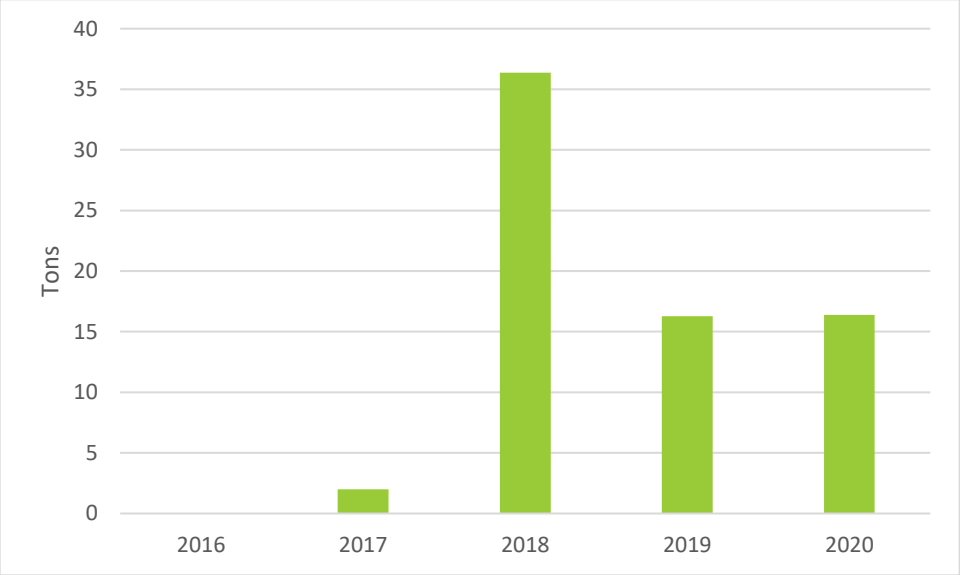


Figure H-7.3 above presents the historic tons of batteries reported as diverted in the District. The above information is reflective of three sources, the Transfer Facility, residential/commercial survey, and the industrial survey. A majority of batteries reported as diverted are lead-acid batteries (99%). The remaining less than 1% of batteries collected are dry-cell batteries used in everyday objects like remotes.

Household Hazardous Waste:

Household hazardous waste (HHW) are materials that may be generated in the home and if handled improperly may cause pollution and safety risks. HHW includes used oil, gasoline, diesel and heating oil, kerosene, household batteries, lead-acid batteries, pesticides, paint and paint thinners, mercury containing devices, lights/light bulbs, and electronics.

Costs for HHW collection events are high and not budgeted. In lieu of hosting these events, the District could provide education and resources on the website. Listing outlets for other difficult to manage waste such as:

appliances, batteries, tires, medications, used motor oil, cell phones and electronics is on the webpage.

There are a variety of ways to manage HHW collection. For example, residents in:

- Preble County can dispose of HHW at the Preble County Sanitary Landfill Monday through Friday from 8:30 AM to 4:00 PM, and also from March through November on Saturdays from 8:30 AM to 12:00 PM. Residents can bring a variety of HHW items including oil-based paints, pesticides, household batteries and used oil at no cost. The program does not accept latex paint. According to their recent SWMP update, the District spends roughly $18,000 annually.

- Greene County conducts HHW collection events once per month starting at 9:00 AM and concluding in the early afternoon (times vary). Previously, the County only offered the collection events on Saturdays; however, to accommodate more residents, Greene County moved to holding the events alternating between Tuesdays and Saturdays. Greene County accepts HHW along with scrap metal, appliances with Freon, e-waste, and light bulbs. In another approach, According to their recent SWMP update, the program cost is over $20,000 annually.

- Adams-Clermont issues residents with vouchers for free disposal of HHW year-round after a one-on-one consultation with the staff to determine if there are alternative less expensive disposal options for items. Adams-Clermont informs residents of the voucher program through their website and in education presentations. According to their recent SWMP update, the District budgets about $5,000 annually for the voucher program.

Electronics:

Electronics contain hazardous materials that if improperly disposed can pose health and environmental risks. The best way to recycle electronics is by donation if the item still works or by recycling items that do not work. Any businesses taking electronics either from donation or take back programs should be contacted for their acceptance list.

The District does not host any collection events for electronic waste. The District recognizes e-waste is a growing material stream and wants to be of assistance in diverting these materials from the landfill. The major obstacle is costs.

The District receives all the electronic recycling information from the residential/commercial and industrial survey responses. The average

annual tons of electronics recycled by the District is 1.71 tons over the previous five years.

Other Streams: Used Oil
The District provides a list of locations that accept used oil for recycling in brochures and on the webpage.

B. Conclusions/ Findings:

There are outlets for several difficult to manage waste materials in the District. The high cost of frequent collection events is a challenge faced by the District that prohibits events and the frequency of events from being held.

Given the high cost of HHW, battery and electronic collection events, the District has opted to channel residents to the private sector for disposal options. The benefits of utilizing the private sector for managing restricted waste is the private sector is generally able to provide year-round collection opportunities for residents, whereas collection efforts managed by the County are often limited to every-other-year or yearly events. Another benefit to this model is that it frees up District funds to provide more services in other waste management areas such as the recycling drop-off program. At the same time, there are drawbacks to relying on the private sector. Businesses can close at short notice, leaving residents without disposal access. Additionally, residents are often charged by businesses for disposal, which can be a prohibitive barrier for some residents.

Regardless of the collection approach, households produce hazardous wastes containing chemicals that pose environmental risk. Informing the public to these dangers and providing outlets for proper disposal or recycling can be a priority item. Education on using less-harmful ingredients and more environmentally friendly products can be increased on the webpage and social media outlets.

The District should try to update the lists of outlets that residents are able to take restricted or difficult to manage waste to on their website. By providing more resources and making it accessible to residents, the District can increase diversion rates of these restricted waste streams. The website could also explore including more educational pieces on why it is important to dispose of these materials. Although a passive strategy, this could help educate and spread awareness of proper recycling and disposal of hard to manage waste streams.

Opportunities for restricted and difficult to manage waste the District could consider for this plan update:

- Scrap Tires (ongoing program)

  - The District could consider adding a minimal user charge for residents dropping off tires at collection events to help offset part of the cost needed to run these events, while also ensuring cost is not prohibiting participation.
  - Improve on existing grant fund acquisition for scrap tire collection events.

- Education/Outreach – Existing Program
  - Develop an inventory of scrap tire take-back retailers, service centers, and automotive shops that accept scrap tires and add it to the District's website.
  - Develop an inventory of retailers that accept electronics and e-waste and add it to the District's website.
  - Include more education on why disposing of these materials properly is important and ways to minimize buying these to begin with.

- Evaluate HHW Opportunities (ongoing program)
  - Research and evaluate and partnerships that are possible to achieve within or neighboring the District. The District has not had a HHW collection event in the past five years. A long-term option could be to look into a regional partnership with other Districts or commercial businesses that accept HHW. HHW collection is an issue for many Districts who face similar challenges and high costs of collection events. The potential partnership could seek to develop strategies to overcome the challenges of transportation, proper disposal, and expensive costs.

7. Diversion Analysis

Waste diversion is defined as the amount of waste recycled, also called diverted, from entering the waste stream through source reduction activities. These are activities that such as waste minimization, reuse, recycling, and composting. This analysis looks at the diversion programs, infrastructure, and trends to evaluate the District's diversion rate over the planning period and assess any major impacts that the District has had regarding fluctuations over the years. Finally, this analysis looks at how to better assess those impacts.

A. Evaluation

Figure H-7.1 Residential/Commercial Diversion Rate

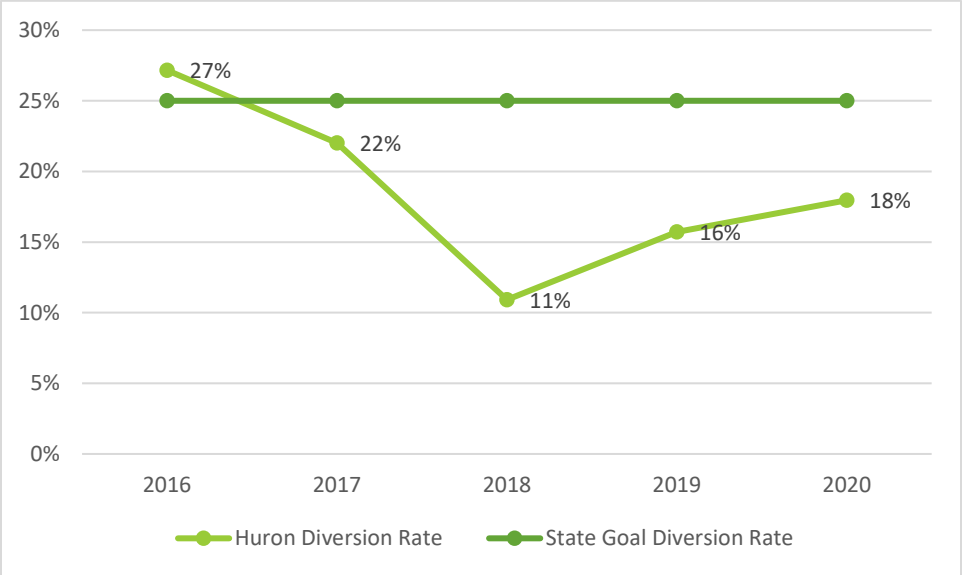


Figure H-7.1 presents the District's residential/commercial diversion rate over the past five years in comparison to the Ohio EPA's Goal 2. As shown above, the District's residential/diversion rate fell below the Ohio EPA's goal diversion rate in 2017 and has not reached the goal rate since. Over the past five years, the average diversion rate was 19%, well below the goal rate.

Overall, the diversion rate has been decreasing over the last five years. However, the District has observed increases in residential/commercial diversion rate since the low of 11% in 2018. However, as discussed in Appendix E, 2018 is an outlier and it seems there was a lack of reporting that year that led to such low numbers. The increase in diversion rates over the last two years seems to be most closely linked to the increases in curbside and drop-off recycling tonnages for 2019. Both services reported receiving more than 400 tons than the previous year in 2019. The increase in 2020 diversion rate does not stem from these services, however. Despite these services decreasing in 2020, the commercial survey results yielded an

almost 800-ton increase from the previous year. It is likely that 2020 had better respondent data, leading to the upward trend in diversion.

Figure H-7.2 Disposal and Diversion Trends

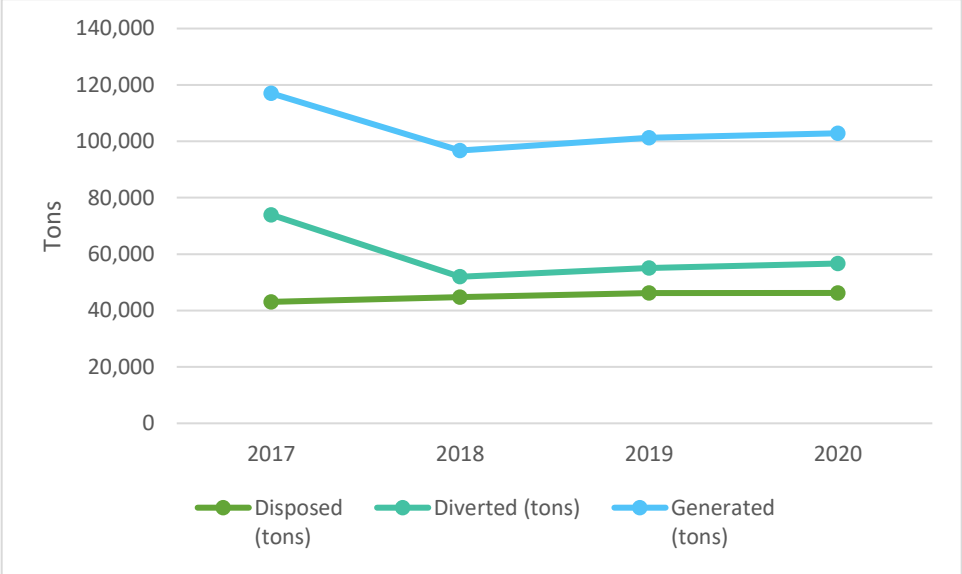


Figure H-7.2 presents the historic amount of waste disposed, diverted, and generated over the past four years. As discussed earlier, the year 2016 is not included as there was a lack of data for that year, causing it to be inaccurate. As shown above, the total amount disposed has remained relatively flat. However, the amount diverted took a significant drop from 2017 to 2018. This stems from a roughly 16,00 ton decrease in reported industrial tons in 2018. It is likely this is because an industrial survey respondent stopped reporting in that year. Since 2018, both disposed material and diverted material have remained relatively consistent, with only minor increases year over year.

Figure H-7.3 Residential/Commercial Diversion per Material 2020

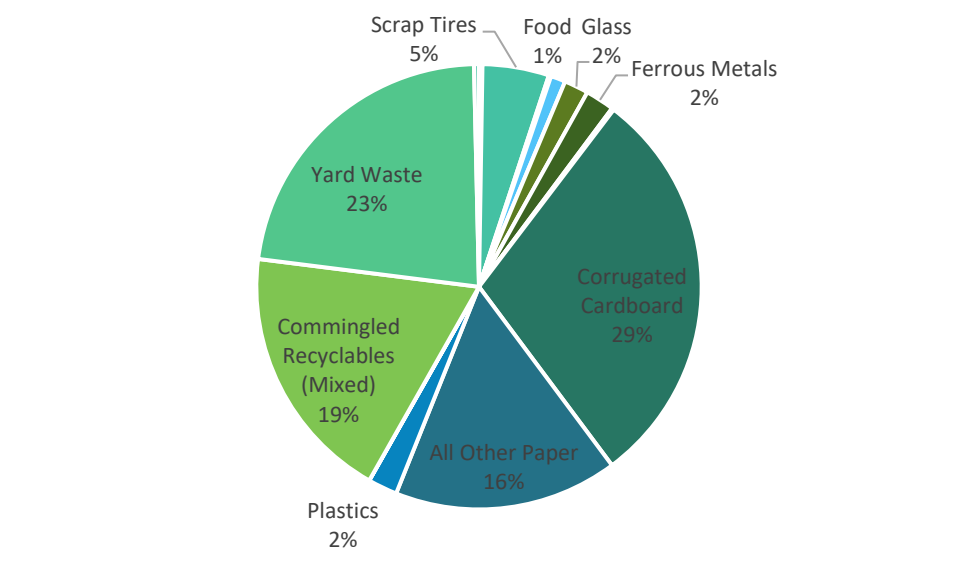
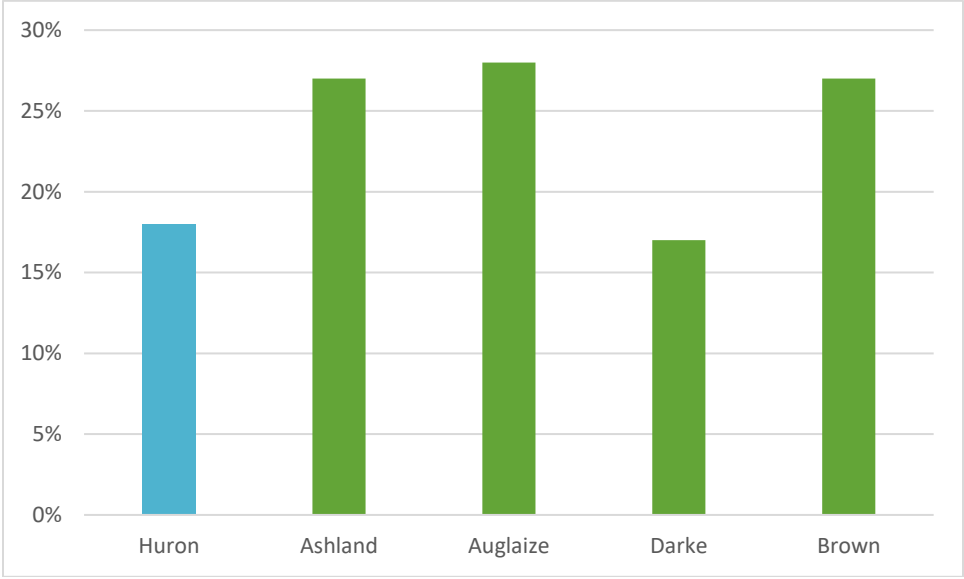


Figure H-7.3 presents the residential/commercial diversion by material for the District in the reference year. The top three materials diverted were corrugated cardboard (29%), commingled recyclables (19%), and all other paper (16%). The following categories had reported values in the survey results but were too small of a percentage to be shown graphically: Appliances, Used Motor Oil, Lead Acid Batteries, Non-Ferrous Metals, Rubber, and Other. See Appendix E for further information.

The data collection process is very important to help analyze diversion rates for the District. The information above is collected from a variety of sources. The largest sources of information are from the EPA Commercial Survey (26%), data from recycling facilities (25%), and Ohio EPA commercial retail data (17%). Other sources of information include curbside recycling services, drop-off recycling locations, composting facilities, and Ohio EPA scrap tire data. The Ohio EPA residential/commercial sources reported diverting 8,914 tons of material in the reference year.

Figure H-7.4 Benchmark Residential/Commercial Diversion Rate



Source: Ohio EPA Waste Flow Data

Figure H-7.4 compare's the District's residential/commercial diversion rate with that of similar District's diversion rates. The three District's being compared are all similar composition and population size. Huron's unadjusted population was 58,161 in the reference year. The four comparison Districts had populations of 53,263 in Ashland, 45,656 in Auglaize, 50,422 in Darke, 43,294 in Brown

When comparing these other Districts, Huron was well below the Districts of Ashland, Auglaize, and Brown who had a 27%, 28%, and 27% diversion rates respectively. All three Districts are above the State Goal 2 residential/commercial diversion rate of 25%. In the reference year, Huron had an 18% diversion rate which was below the State Goal 2. Only Darke had a lower Diversion rate of 17% in the comparison.

Figure H-7.5 Industrial Diversion per Material 2020

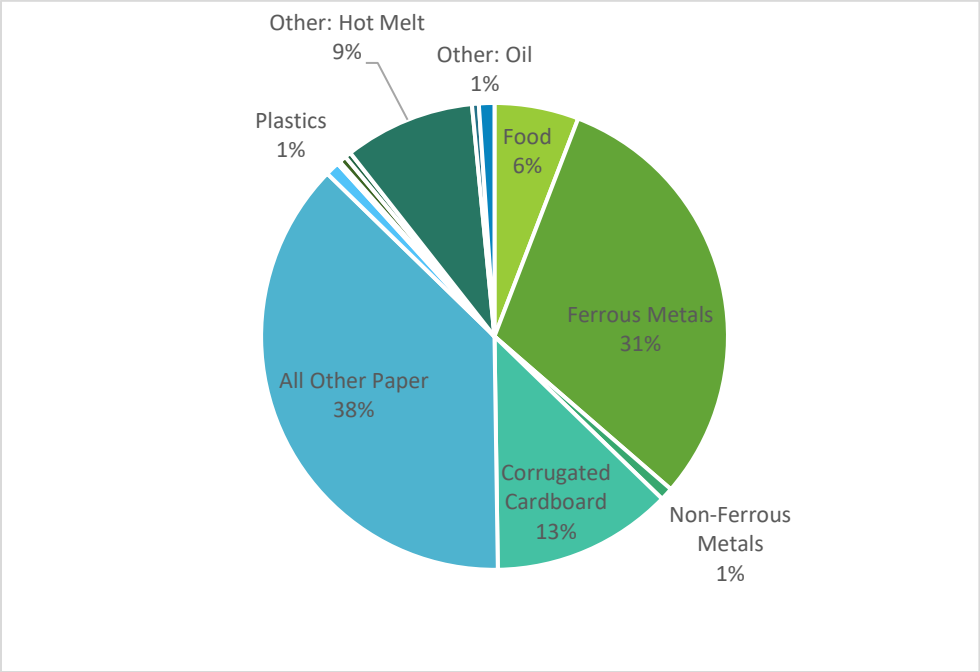


Figure H-7.5 presents the industrial diversion per material for the District in the reference year. The information above is mostly the District's annual survey efforts with 1% of the data being collected from other recycling facilities. As discussed in Appendix H, the information above is dependent on voluntary responses of the survey and therefore is only as accurate as the respondents.

The top three materials diverted were paper (38%), ferrous metals (31%), and corrugated cardboard (13%). The following categories were reported but were too small of a percentage to be shown graphically: Rubber, wood, commingled recyclables, other (incinerated).

Figure H-7.6 Industrial Diversion Rate

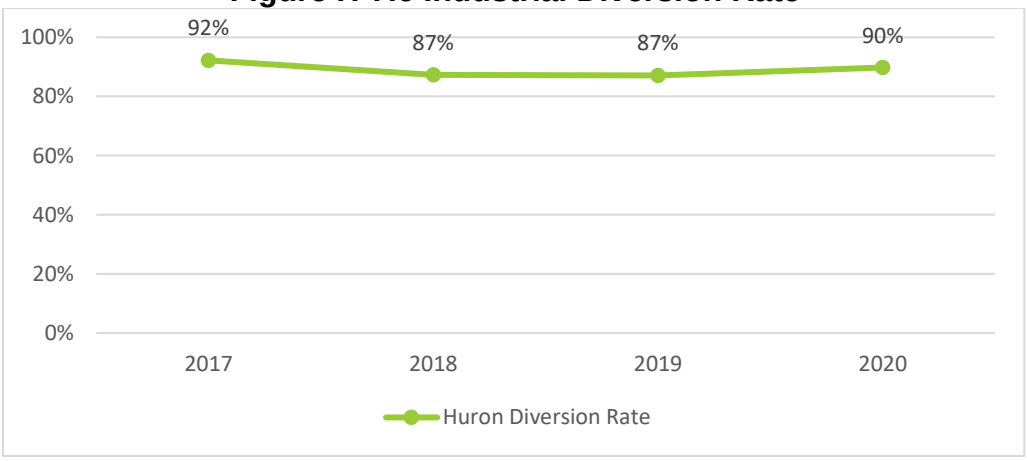


Figure H-7.6 presents the industrial diversion rate. The District's industries historically achieve high diversion rates with little intervention from the District, though programs are offered.

B. Conclusions/Findings

The District's total diversion rate took a steep drop from 2017 to 2018 but is slowly increasing from 2018 to 2020. Despite this, the District still did not reach the 25% diversion rate to meet State Goal 2. There was a steep drop in the overall generation from 2017 to 2018. The total disposed over the past four years has remained consistent, meaning the significant drop in total waste generation was directly correlated with the decrease in waste diversion.

The District can pursue opportunities moving forward to continue exploring effective ways to increase waste diversion. Increasing education and outreach is a strong step the District may take. Education efforts on what is recyclable, what programs exist, and where to drop off recyclables will help to increase diversion rate. The District will explore opportunities to improve outreach to residents and change behaviors to move beyond a take, make, waste system. Opportunities to do so include enhance social media outreach, frequent SWMD website updates, adding an event calendar to the website, publishing newsletters, and working with local media to create advertisements.

Increasing outreach and response rates for residential/commercial and industrial surveys is an area the District could improve on. The District receives a low response rate to the residential/commercial surveys. The more data the District is able to receive, the higher the diversion rate will be. The District will make a concerted effort to improve data collection by updating the list of businesses to survey, include online links and QR codes to surveys on material distributed, create a link to the survey on the District website, and conduct outreach and follow-up communications with surveyed entities.

The industrial sector achieves high historical rates yet with the 2020 State Plan requirements, the District will need to continue to provide three strategies for the industrial sector.

8. Special Program Needs Analysis

Ohio Revised Code 3734.57(G) gives SWMDs the authority to fund a number of activities that are not related to achieving the goals of the state solid waste management plan. In addition, there are other programs that SWMDs fund that are not addressed in either the state plan or law. This analysis evaluates the performance and status of these activities and programs and the value to the SWMD.

Potential allowable uses evaluation: to consider include:

- Cleaning up solid waste and scrap tire dumps (particularly if the SWMD has a large number of open dumps). The District does not have a large number of open dumps.
- Health department support [pursuant to ORC Section 3734.57(G)(3) and (G)(7)]. [NOTE: SWMDs can provide financial support to only those health departments that have been approved by Ohio EPA to enforce the solid waste laws and rules.] The Huron County Board of Health is not on Ohio EPA's approved list.
- Enforcement agency support [pursuant to ORC Section 3734.57(G)(7)]. The District does not have a need for enforcement agency support.
- Financial assistance for counties for the costs of hosting a solid waste facility [pursuant to ORC Section 3734.57(G)(4)]. No host fees are implemented.
- Paying the costs incurred by a board of health for collecting and analyzing samples from public or private water wells on lands adjacent to solid waste facilities [pursuant to ORC Section 3734.57(G)(5)]. The District did not support well testing.
- A program for inspecting solid wastes generated outside of Ohio and disposed of at solid waste facilities located within the SWMD [pursuant to ORC Section 3734.57(G)(6)]. The District did not inspect out-of-state waste.
- Financial assistance to municipal corporations and townships for the costs of hosting a composting, energy or resource recovery, incineration, or recycling facility [pursuant to ORC Section 3734.57(G)(9). The District did not provide financial assistance to municipal corporations and townships for hosting a facility.

9. Financial Analysis

The purpose of this analysis is to examine the SWMD's current financial position and assess the financial requirements and revenue sources throughout the next planning period. The SWMD is currently funded through revenues from generation fees and to a lesser extent a combination of "other" revenue streams that are not consistent year to year.

A. Revenue

Disposal Fee

The District does not have a disposal facility located within its boundaries. As such, the District does not have a disposal fee. There is no reason to expect a District-sponsored disposal facility to be developed during the planning period.

Generation Fee

In accordance with ORC Section 3734.5, the District has set its generation fee at $4.50. These fees are collected per ton of waste generated. The District expects the generation fee will increase in 2031 to $5.50 to keep adequate funding for the District.

Other Revenue

Grants

The District received one grant over the previous five years for $7,000 dollars from the Ohio EPA. This is not a stable source of revenue.

Recycling Revenue

The District charges fees for services providing recycling drop-offs to townships. The five-year historical average is $12,500 dollars.

Legal Payment

The District received a legal payment from a lawsuit with Erie County in 2018 of $30,000 dollars. This is not a stable source of revenue.

User Fee

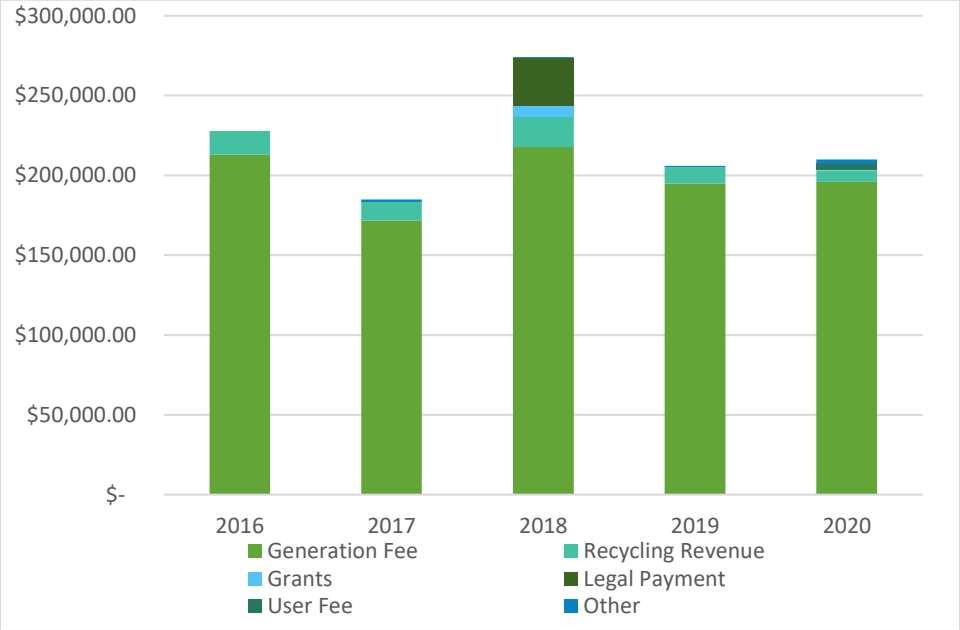
The District received a user fee of $4,200 dollars in the reference year. This was the only time a user fee was received.

Other

The District receives revenue from a combination of sources that are labeled "other". The five-year historical average is $678.

As shown in **Figure H-9.1** below, the District receives revenue mainly from generation fees. There are other sources such as recycling revenue that are relatively stable year over year, but this is only a small percentage of the total revenue received.

Figure H-9.1 Historic Revenue Stream



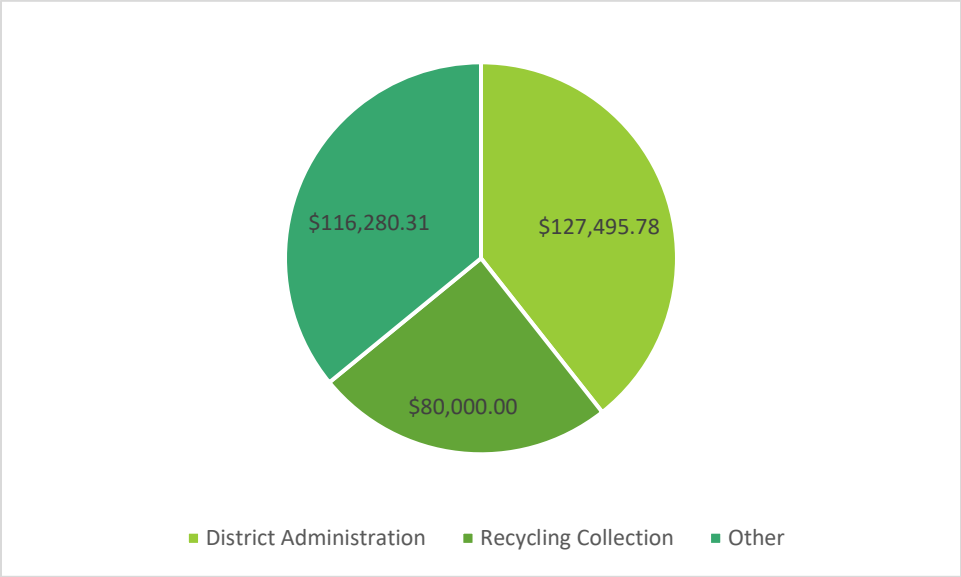
Source(s): Appendix O

As can be seen above, the District's main sources of revenue are generation fees and revenue from recycling. The average annual revenue from generation fees over the past five years is roughly $221,000. This is roughly 90% of the annual revenue. The remaining 10% comes from the various sources listed above. Grant funding was received in 2018 but this is competitive and is not guaranteed.

B. Expenses

In the reference year, the only category that accrued expenses was plan implementation. In 2020, plan implementation cost the District over $320,000. **Figure H-9.2** below breaks down this category by specific cost.

Figure H-9.2 Plan Implementation Distribution

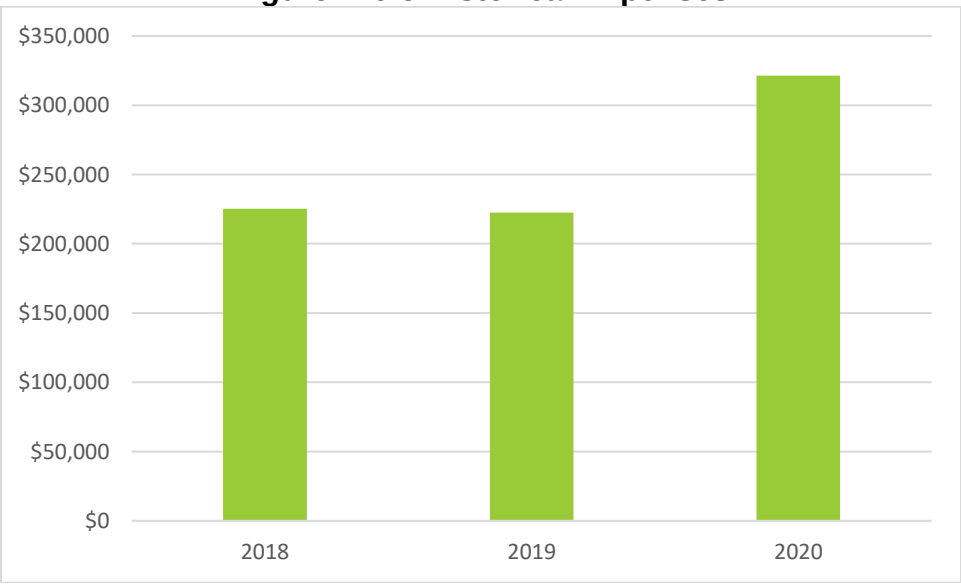


Source(s): Appendix O

Of the $127,500 spent on district administration, 65% was spent on personnel, 26% was spent on other, and 9% was spent on office overhead. The District spent $80,000 on drop-off recycling collection.

Historically over the three years the District has averaged $256,390 in expenditures annually. Costs increased in 2020 due to an increase in “other” expenditures. This expense category increased over $80,000 dollars when compared to the previous year. This expense totaled $116,280 and was the result of legal disputes with Erie County. The District does not expect this category to remain a high cost in future projections.

Figure H-9.3 Historical Expenses



Source(s): Appendix O

Figure H-9.3 shows the District's three-year historical expenditures. Note, there was an issue with the Ohio EPA reports and the District's reports. This has been reconciled back to the ending balance of 2017 but was not tracked farther back. The previous plan projected a 2020 expense of $229,288. When removing the unexpected legal dispute costing the District $116,280, this projection was more than observed amount. Without the legal dispute, the District spent $207,496 in the reference year, 10% less than projected.

The District prepared **Table H-9.1** to compare expenses with other solid waste management districts of similar population sizes to Huron County. Normalizing the expenses per person, the District spent $5.97 per person on its programs. This is the second lowest of the five districts in the comparison. Erie County was the lowest at $4.65 per person and Auglaize was the highest at $28.15 per person.

Table H-9.1 SWMD Comparison of Expenses

District	Population	Expenses	Per Capita Expenses
Huron	53,830	$ 321,349.22	$ 5.97
Holmes	43,960	$ 318,084.89	$ 7.24
Erie	69,678	$ 324,142.00	$ 4.65
Darke	50,422	$ 367,967.11	$ 7.30
Auglaize	45,656	$ 1,285,078.63	$ 28.15

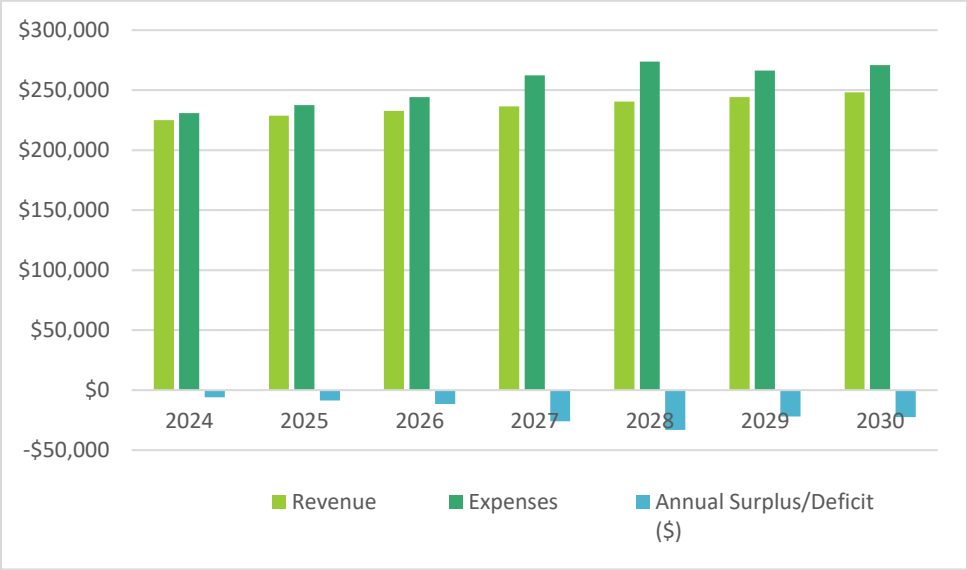
Source(s):
Ohio EPA SWMD Disposal, Recycling, and Generation Report
Ohio EPA SWMD Fee Summary Report

Excluding Auglaize SWMD, the average per capita expense of the remaining four Districts is $6.29. Huron SWMD lies below the average. Auglaize SWMD has nearly four times more expenses than the next highest SWMD of Darke. The reason Auglaize SWMD is significantly higher than the other counties compared to it is that they operate an MRF. Auglaize SWMD spends nearly $250,000 operating the MRF as well as over $250,000 on their 10 drop-off recycling locations annually. This is offset by a $9.00 generation fee.

C. Carry Over Balance

Figure H-9.4 below shows the revenue, expenses, and annual surplus for the first five years of the planning period. The District is projected to spend more than it earns in revenue, decreasing the balance the District has at the end of the year. Based on the projections, the District will have just over $13,000 dollars left in the balance after 2030. The District expects to increase the generation fee from $4.50 to $5.50 in 2031 to avoid a balance of $0.

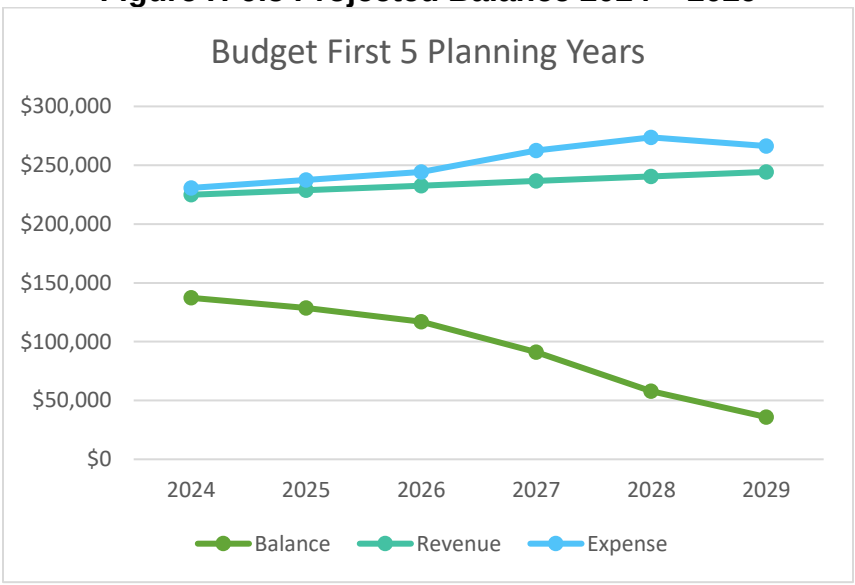
Figure H-9.4 Budget Trends



Source(s) Appendix O

As can be seen above, the District is projecting expenses to remain higher than revenue. This will decrease the District's annual balance until it becomes negative if there are no changes. The District is expected to spend an average of $18,535 more annually than received in revenue from 2024 to 2030. **Figure H-9.5** below details the projected balance for the first six years of the planning period.

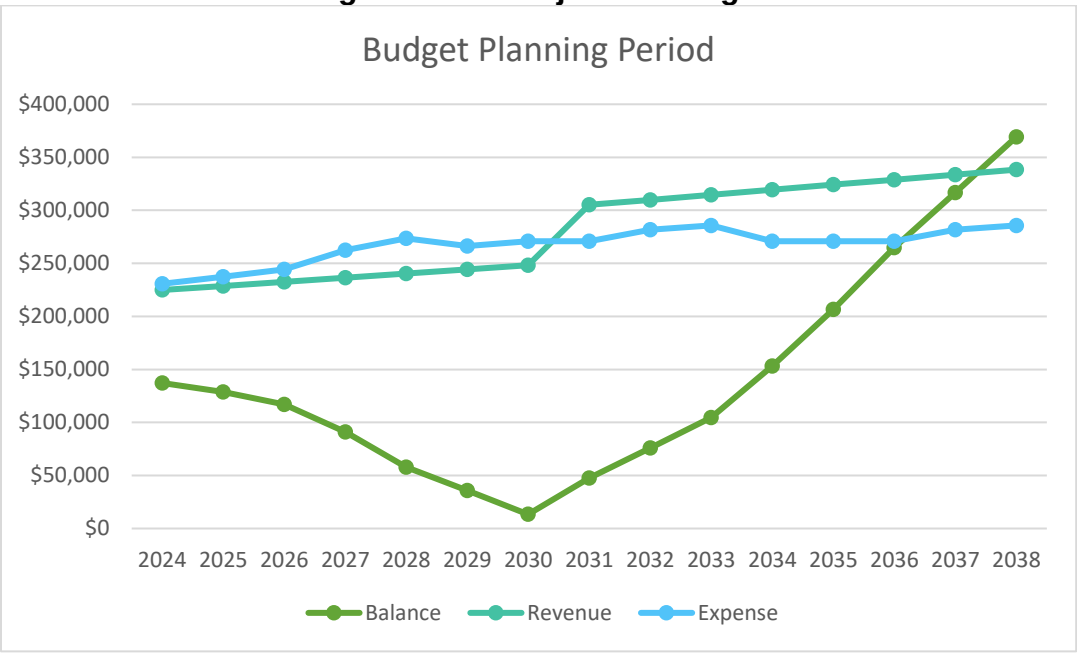
Figure H-9.5 Projected Balance 2024 – 2029



The District projects that if nothing is changed to increase the balance, the District will reach a dangerously low $35,000 in 2029 and will decrease further to $13,000 in 2030. To prevent the District from reaching a balance of $0, this plan explores a few options the District could take.

1) Additional funding could be generated by increasing the District's generation fee. Specifically, if the generation fee were to increase by $1.00 in 2031 to $5.50 the District would be able to recover its projected balance. **Figure H-9.6** below projects what a $5.50 generation fee enacted in 2030 would do the District's balance.

Figure H-9.3 Projected Budget



As discussed in Appendix O, the expected generation fee increases in 2031 would increase the District's balance by an average of $44,500 through the end of the planning period. The District's projected balance at the end of the planning period would be nearly $370,000, an increase of over 1000%.

2) Another funding option is adding a contract or designation fee. The District currently designates all waste to flow through the Huron County Transfer Facility. A contract or designation fee is collected at the first point of disposal by the designated facility. The majority of in-district waste is delivered to the Huron County Transfer Facility. Adding a contract or designation fee is not so different from increasing the generation fee. However, if ownership of the Transfer Facility changes, a designation fee system could be favorable.

D. Conclusions/Findings

Funding sources are not expected to bring in enough revenue to supplement the District's projected expenditures. The District will have to make changes

to ensure their balance remains at adequate operating levels. The options described above are opportunities the District may explore to achieve this.

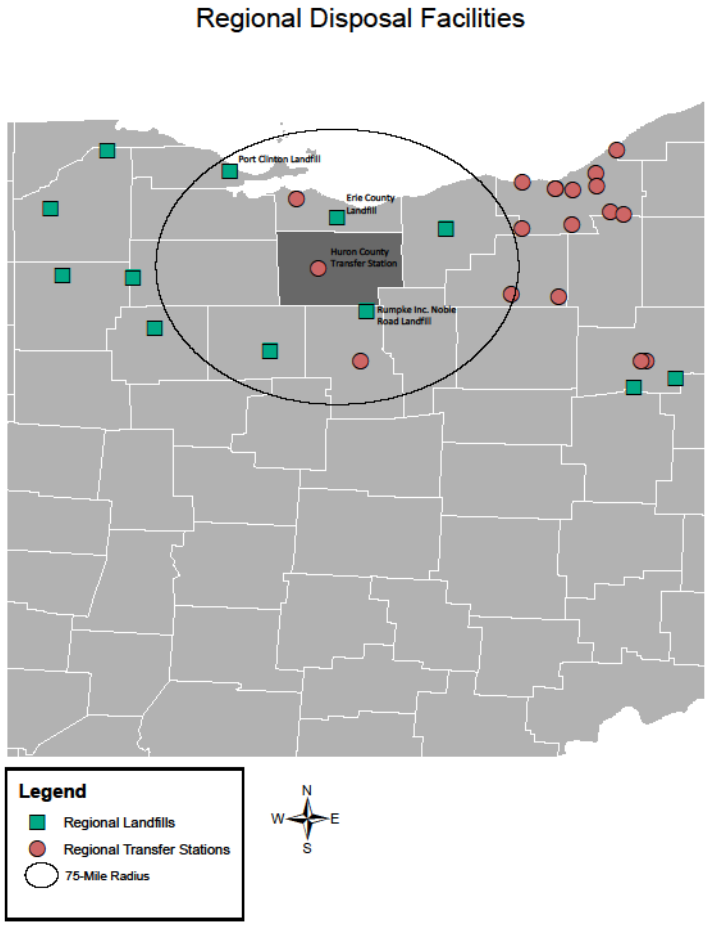
10. Regional Analysis

A. Evaluation

Waste Impacts

The District has 5 landfills and 4 transfer facilities within a 75-mile radius of the center of the Huron Solid Waste District. Within Huron County, there is a single transfer station, the Huron County Transfer Facility. The District used all 5 landfills within the radius in the reference year. The Erie County Landfill is where most of the waste generated is landfilled, receiving 88% of the waste. Port Clinton and Rumpke Inc. Noble Road Landfills received 7% and 3% respectively.

Figure H-10.1 Regional Disposal Facilities



Erie County Landfill, Port Clinton Landfill, and Rumpke Inc. Noble Road Landfill collectively receive 98% of the total waste generated by the District. They are located in Erie, Ottawa, and Richland Counties Respectively.

The District use flow control of waste to the County's Transfer Facility. Flow control allows aggregation of volumes of municipal solid waste resulting in the potential for operational benefits and disposal benefits. Operational benefits occur because a larger volume is managed with the impact of more tons processed at a lower cost per ton. This is because the facility fixed cost and other semi variable costs are a sunk cost resulting in a reduced overall marginal cost for each additional ton processed.

Transfer stations typically obtain a contract for final disposal from a landfill. Flow control allows for the aggregation of volume which in turn creates pricing benefits per ton in the marketplace. The higher volumes are an operational benefit to landfills and typically higher volume contracts can result in a lower cost per ton for final disposal at a landfill.

Diversion Impacts

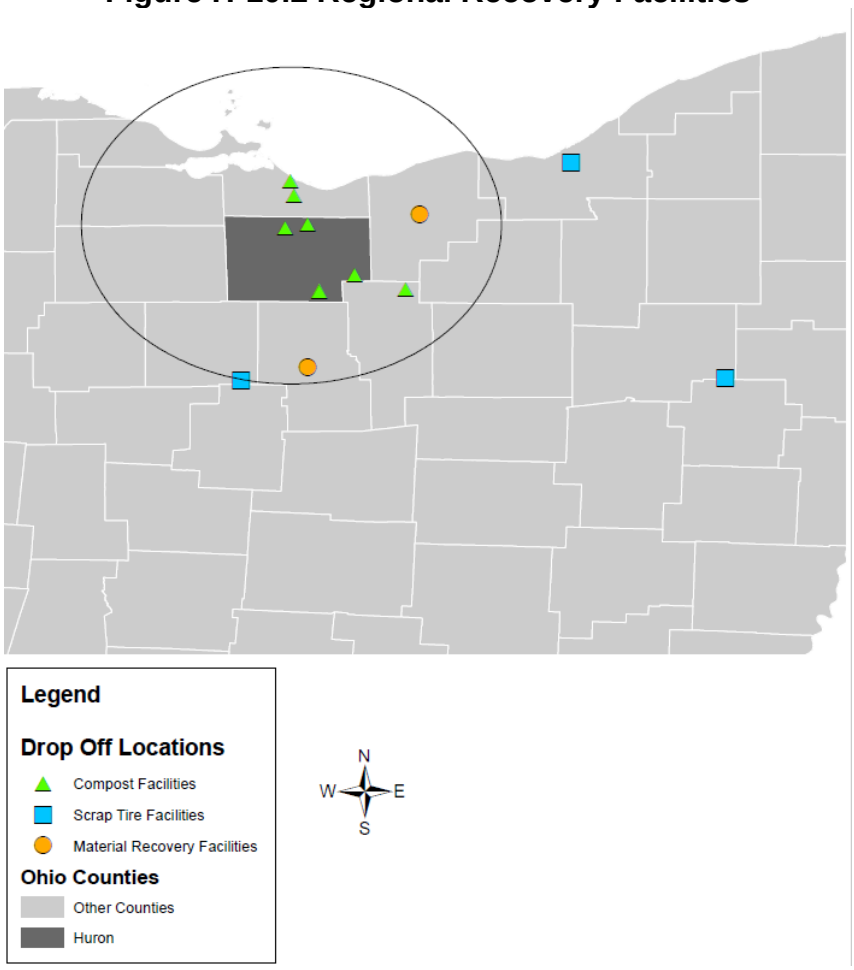
There are 3 material recovery facilities (MRF), 1 scrap tire facility, and 7 compost facilities located within a 75-mile radius of the center of the Huron Solid Waste Management District. Of the four compost facilities in Huron County, one is a class three, and the remaining are class four. Barnes Nursery in Erie County is the only class two facility within 75 miles. The other two remaining compost facilities not in Huron County are both class three. There are four composting facilities and one material recovery facility within Huron County. While organics diversion facilities are within a reasonable distance there is a lack of collection infrastructure to transport feedstock to the processing facilities. Collection of organic waste is integral to any composting system and economics is generally more than twice the processing cost on a per ton basis.

All three facility types are within reasonable distance of the District. However, there is only one scrap tire facility within 75 miles that may limit transport of this material.

There is an adequate amount of processing facilities and collection infrastructure within the District. However, the District only used one material recovery facility, the Richland County Recycling and Transfer Facility to the south, in the reference year. Baling and marketing of source separated mixed paper, cardboard, and cans occurs at the Huron County Transfer Station. These commodities are baled and brokered by Transfer Station staff and the facility receives the revenue from the recycled material.While the District has not used the facility, the Lorain County Resource Recovery

Complex located in Lorain County to the east of the District is within reasonable range to transport materials.

Figure H-10.2 Regional Recovery Facilities



B. Conclusions/Findings

The transfer facility is a necessary element in the District's waste management system because of the distance to available municipal solid waste landfills. These benefits include support for many ancillary recycling programs and the implementation of the solid waste plan. Flow control is an effective method to support the public asset by securing volume and revenue thereby providing for the benefits of the transfer facility.

The District is located in an advantageous location, being located near large cities such as Toledo and Cleveland. As such, there is single stream processing infrastructure and a collection network to provide access to other processing facilities. The District has strong regional access to facilities and there is no reason to believe this will change throughout the planning period.

Organics collection economics is prohibitive for expanding diversion of organic materials. The District could look to focus on additional reduction strategies for managing this waste stream.

11. Data Collection Analysis

The State of Ohio classifies solid waste by three generation sectors: residential, commercial, and industrial. Solid waste districts are required to quantify the amount of solid waste that all generators reduce, recycle, compost, incinerate, and dispose in order to establish a baseline and to demonstrate achieving Ohio's landfill diversion goals. Collecting data is challenging due to a variety of factors and takes considerable time and effort to gather and analyze. Regardless, the primary objective of the District is to divert materials from landfills, therefore data collection is important to measure results. The data collection process from beginning to end for each type of generator is described below.

The District was not able to demonstrate achieving Goal #2 of the State Plan, which requires a waste reduction and recycling rate of at least 25% for residential/commercial waste. However, it was able to demonstrate a recycling rate of at least 66% for industrial waste (even though the 66% goal is no longer a target in the 2020 State Plan). In the reference year, the District's residential/commercial sector achieved a waste reduction and recycling rate of 18% and the industrial sector achieved a 90% recycling rate.

The District devotes staff time to overseeing the data collection efforts as well as hiring a consultant to advise the District.

Residential

The SWMD gathers data from its residential sector through a variety of sources and programs. Residential recycling tonnages are reported by communities and includes data from any curbside or drop-off recycling, yard waste collection, and any special collection programs like electronics, household hazardous waste, or scrap tires.

The data reported from curbside and drop-off recycling programs is possible to be double counted or miscounted. In order to prevent this, the data is cross referenced to community reported tonnages from haulers who operate in the area. If there are any inconsistencies identified, the community and hauler will investigate it.

Lastly, the data resulting from programs that are sponsored by the District, such as scrap tire collection, are included in the residential recycling totals. This data comes from the various organizations or contractors who operate these programs.

Commercial/Institutional

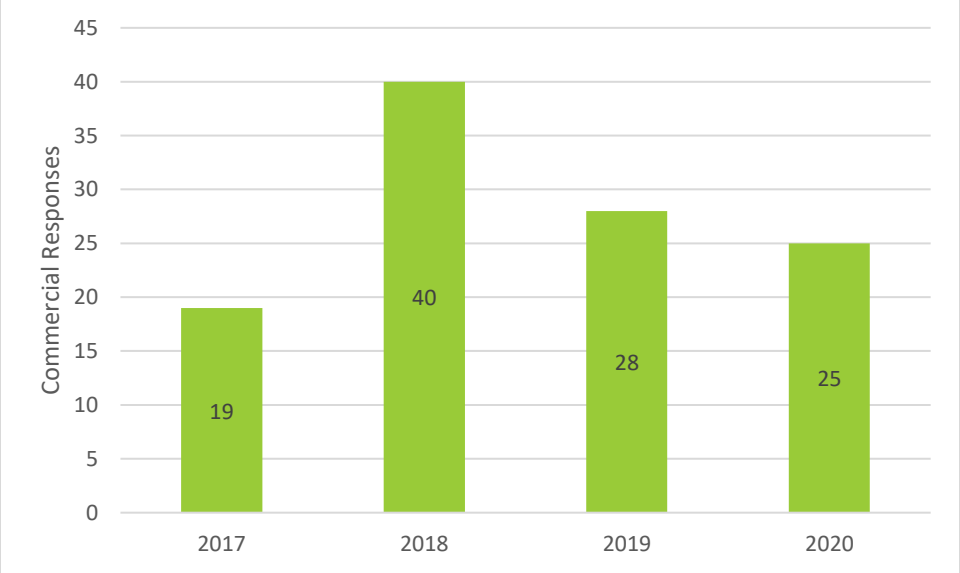
The District uses a multitude of sources to gather data on the commercial/institutional sector. These include the following reports from the Ohio EPA: Material Recovery Facility and Commercial Recycling Data Report, Compost Facility Data Report, Scrap Tire Report, and Facility Data Report. There is a possibility of double counting when using Ohio EPA and District data. To prevent this from occurring, the District meticulously tracks and records information with built in methods to prevent double

counting in the collection phase of an Annual District Report or SWMD Plan Update. There have been no reported issues with using the Ohio EPA data for the commercial/institutional sector.

The District conducts commercial business surveys annually. Each survey there are multiple options to receive the survey and send it back. There is a hard copy which can be mailed out to respondents and there is also an electronic version of the survey which is available to previous and repeated respondents. Survey recipients are given the option to submit their response online, mail, e-mail, or fax.

The more responses the District receives, the more accurate the numbers will be to the actual recycling numbers. This allows the District to better analyze data and track their progress towards attaining certain goals and how to proceed with future plans for managing waste. Historically, the District has spent considerable time and resources tracking down data and encouraging participation. This has helped to increase and/or maintain the levels of the response rates annually. Allowing participants to respond online has made the process easier and more time efficient as well. Having a central online platform that is used every year also gives them access to prior year's data, allowing them to see progress or address internal issues themselves. Response rates from the last four surveys are listed in **Table H-11.1** below.

Figure H-11.1 Residential/Commercial Response Rate



Response rates have fluctuated over the last four years. 2017 saw the lowest response number at 19, followed by a promising high of 40 responses the following year in 2018. However, the District was not able to maintain this number of responses and 2019 to 2020 saw a consistent number of responses.

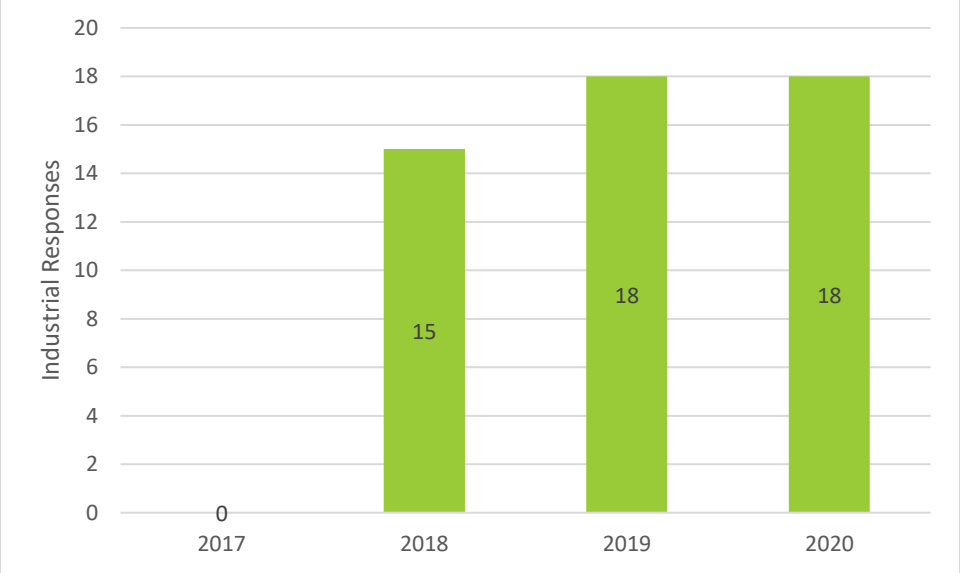
There are variety of reasons for the fluctuations in responses. As discussed in Appendix E, the District stopped receiving responses from various participants throughout the years due to businesses closing and/ or staff changes that led to the loss of contact.

The District will continue to offer multiple methods for completing the survey to make it as easy and efficient as possible for commercial businesses to respond.

Industrial

The District gathers data in a similar manner as it does for residential/commercial by surveying the industrial sector businesses. The District uses the same Ohio EPA reports as the residential/commercial sector listed above. An identical survey procedure is done for the industrial sector. Surveys were sent to operating businesses and employers were contacted by phone and/or email. **Figure H-11.2** presents the response rate below.

Figure H-11.2 Industrial Survey Responses



The industrial survey responses have not been as successful as the commercial response. Despite the process used to send and receive the survey being identical, the industrial sector has not historically generated as much as the commercial. However, there have been stable numbers of respondents over the last few years. In 2017 there are no recorded responses to the industrial survey for that year.

Figure H-11.3 Rate of Survey Responses

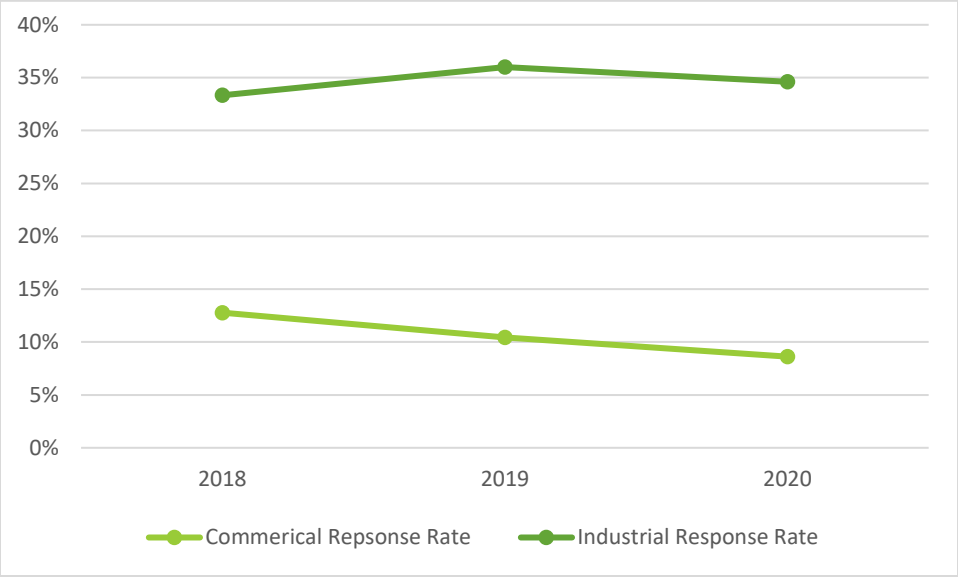


Figure H-11.3 above details the success rate of responses for both the commercial and industrial surveys. Despite receiving less responses for the industrial survey compared to the commercial survey, the industrial response rate is significantly higher. Over the last three years, the District has on average sent out 49 surveys with and average response rate of 35%

The commercial response rate has been declining in recent years. In 2018 the response rate was 13% but this number has dropped in two consecutive years to a 9% response rate in the reference year. While the response rate may not be on par with the industrial survey, the number of surveys sent out is much larger. As such, the number of responses is also much larger. Over the last three years, the District has sent out an average of 290 surveys annually with an average response rate of 11%. It is unclear why the District has seen a decrease in commercial survey responses. The District has remained consistent in the survey process, annually updating the businesses for changes in ownership, location, closures, and new openings before sending out survey materials. In 2020, it is likely the COVID-19 pandemic caused many businesses to halt or cease operations entirely, thus leading to a lower response rate.

The District should continue to put resources into the surveying process. This process brings valuable data that is used for tracking progress towards state goals and helps determine how well the District is diverting waste. The more responses and accurate data the District receive from the annual surveys, the better the information available becomes.

12. Education/Outreach Analysis

The 2009 State Plan goals restructured the education and awareness goals with the intention of creating minimum standards for outreach programming but still allow for flexibility for localized outreach and education. The 2009 State Plan refocused the general "awareness" of recycling to changing behavior through outreach. This was maintained in the 2020 State Plan.

The following analysis evaluates the District's existing education, outreach, and technical assistance efforts to determine:

- If the programs address all five target audiences (residents, schools, industries, institutions and commercial businesses, and communities and elected officials).
- Effectiveness and adequacy of programs.
- Strategy for incorporating Goal 4 into the programs.

A. Minimum Education Requirements - Evaluation

In accordance with Goal 3 of the 2020 State Plan, each District is required to provide four minimum education programs: website, resource guide, infrastructure inventory and speaker/presenter.

Website

The District maintains a website at https://www.huroncountyswmd.com/home. This is a website entirely focused on the Huron Solid Waste Management District. The District follows best practices for a website with clear and concise information with helpful links and/or contact information. The website also details a brief history of the District and presents the most up to date SWMD plan update on its home page as well as quick statistics from the most recent Annual District Report.

The website strongly focuses on District programs and helpful resources such as the drop off locations and transfer station addresses that include clear instructions on what will be accepted, turned away, the costs associated, weight requirements, and materials accepted.

The website is managed by Huron County and the District has access to add or adjust information as needed. The website is a resource that provides much of the information residents would and businesses would require to be familiarized with the District's policies, locations, and statistics on solid waste management.

Conclusions:

The District maintains an informational website that has clear and concise information that any resident or business would be interested in learning. The webpage is user friendly with organized tabs and headings to lead users to their

desired destination. There is a plethora of information on the District with useful statistics, locations, accepted materials, and contact information

Possible additions to the website include the following:

- Links to further resources from the Ohio EPA Solid Waste Management Page.
- Consider the addition of pictures or videos from any District events, collections, or county endeavors of solid waste management.
- Include a Frequently Asked Questions (FAQ) section that compiles questions asked by users. Look into adding the informational answers to these questions.

Comprehensive Resource Guide

The District's webpage includes information for businesses and households to find outlets for recycling materials. The website is a resource guide for SWMD managed outlets and services. Additionally, the District has a list of resources and links to outside information as well as contacts and facilities.

Conclusions:

- The District has a strong resource guide on their website. Though not on a single page, the information is readily available and user friendly.
- Consider including links to the Ohio EPA's solid waste management site for additional information.

Infrastructure Inventory

The inventory of solid waste management infrastructure is located in the District's plan update and is updated every five years. Additionally, the District's drop-off recycling locations and curbside recycling information is listed on the website.

Speaker and Presentations

The District lists the Assistant Coordinator of the SWMD as the primary contact available for speaking engagements. The District webpage includes any classroom visits, lesson plans, and presentations all fall under this role.

B. Goal 4 Outreach and Education - Evaluation

In accordance with Goal 4 of the State Plan, the District is required to provide education, outreach, marketing, and technical assistance to identified target audiences.

All types of behavior change initiatives, even mass-media based campaigns, can successfully employ the tools of social marketing, which include social norms, goals/commitments, feedback, prompts, and one-on-one interactions. The District offers the following outreach and education strategies:

- Technical assistance on hard to manage and organic wastes

- Community partnerships to post drop-off schedules on both party's websites
- Community education efforts for correct use of recycling carts
- Recycling Assistance Program
- Public awareness efforts through District website, newspapers, cable and TV ads, press releases, and brochures.
- Educational brochures for schools
- Attending community and regional events
- Civic presentation groups on recycling issues
- Newsletters to subscribing businesses and industries
- Commercial and industrial workshops
- Business and industry outreach efforts via email
- Yard waste education through Huron Soil and Water Conservation District

The District uses many forms of outreach and education to teach and inform residents how to properly manage and divert waste. These programs are crucial for measuring and ensuring recycling programs are effective. Inadequate outreach and education will lead to improper use, or lack thereof, of District funded programs and initiatives designed to reduce waste. The District's primary source of educational material is the website.

The District was faced with many challenges in recent years due to employee shortages as well as the COVID-19 pandemic. As a result of these challenges, the District saw a lack of reporting and programming.

<u>Target audience – Residential Sector</u>
The District has several programs targeted towards this audience sector. The below activities are all from the reference year (2020).

1) Household Hazardous Waste (HHW): The District does a variety of activities regarding HHW and education such as providing technical assistance, attending events, or taking phone calls about HHW, and maintaining a running list of locations that take certain HHW such as Lowes and Home Depot.

2) Drop-off: The District includes board member phone numbers and updated drop-off locations on their website. Furthermore, the District actively works with communities to coordinate drop-off locations and make the information available.

3) Curbside Collection: The District actively works with communities to educate residents about the correct preparation of recycling materials.

4) General: The following are efforts made by the District to educate the residential sector that are not specific categories such as above:

a. Recycling Assistance Program - maintain list of recycling options for used oil, lead-acid batteries, and other materials and distribute at various locations.
b. Public Awareness - continue to use a variety of methods to reach residents including website, regular column entries in newspaper, cable, and television ads, press releases, and brochures.
c. Environmental Events Program - continue interacting with the community through special events. The District usually attends multiple events every year to provide education to residents such as the Clean Sweep, Earth Day, Soil and Water Environmental Conservation Day, Arbor Day, and Recycle Ohio Day at Fall Fun Fest but did not attend in 2020 due to COVID-19.
d. Environmental Education - continue providing presentations to civic groups. The District usually provides recycling and litter education to civic groups but did not in 2020 due to COVID-19.
e. The District includes information about the punch card system on the District website and through discussions with residents and community leaders.
f. The District offers yard waste education classes through the Huron Soil and Water Conservation District who helps with education about soil and water conservation and yard waste management annually.

Current education for this target audience provides a general awareness for the various types of services in the District. To better reach the target audience, the District should consider creating a social media platform to help educate the residents. On this platform, short informational videos or posts can be created to highlight issues the District faces with solid waste management and offer solutions to residents in order to prevent these from arising. These videos could also be posted to the District's website or linked from the website. An important benefit of social media posting is that most sites will track the amount of people the post reaches as well.

In person engagements are education based are designed to promote best practices in managing waste for residents and to inform residents of common misconceptions, mistakes, and solutions. As described above, the District attempts to participate in many different educational activities.

Target Audience: Commercial sector

Commercial sector entities are defined as commercial businesses, multifamily facilities, schools and universities, government agencies, office buildings, stadiums, amusement parks, event venues (stadiums, concert halls), hospitals and non-profit organizations that receive dumpster or compactor service for garbage. Target for this audience is administration and facilities maintenance.

1) Commercial workshops are provided by the District upon request. These workshops focus on the benefits of source reduction and participating in Huron County recycling opportunities. No workshops were requested or held in 2020.

2) Organics Waste Management Technical Assistance - work with Huron County Jail on implementing food waste or yard waste composting. There was no activity in 2020.

3) Business and Industry Outreach (Initiative HC-12.1) - promote availability of waste audits and workshops through website and the Huron County Chamber of Commerce. Promote services to largest generators via email and direct mailing. District initiatives for business were promoted through emails, news articles, and recycling brochures in the Chamber of Commerce office.

Target Audience: Industrial Sector

Industries in Huron County demonstrate a high level of recovery year after year. The District has traditionally provided little assistance to this sector. The District should continue to promote and help when requested.

1) Industrial workshops are provided by the District upon request. These workshops focus on the benefits of source reduction and participating in Huron County recycling opportunities. No workshops were requested or held in 2020.

Target Audience: Schools

1) Establish Quantitative goals and Measure Improvements - education specialist will increase annual presentations/number of students reached, evaluate progress, and review with District Director. A brochure with educational services is available. Contact information for scheduling is available on the website for schools to fill out. An evaluation form is also available and given to audiences after presentations.
2) Environmental Education - continue providing presentations to students and youth groups. The District usually provides recycling and litter education to schools and youth groups but did not in 2020 due to COVID-19.

13. Recyclable Material Processing Capacity Analysis

A MRF is a specialized facility that receives, separates, and prepares recyclable materials for marketing to end-user manufacturers. Materials collected are sent to MRFs to be processed. **I**n 2020. The District sent recyclables to the Richland County Transfer and Recycling Facility. Richland County Transfer and Recycling Facility is owned by Rumpke and a facility used to consolidate and transload recyclables to one of Rumpke's MRFs for processing. Any of the following MRFs could be used for processing the District's materials:

Name	County
Rumpke Dayton MRF	Montgomery
Rumpke Center City Recycling	Hamilton
Rumpke Recycling Columbus	Franklin

The Rumpke Recycling MRF located in Montgomery County is a Category III facility, which pre-sorts, compacts, and transfers recyclables. Once the material is sorted at the Dayton location, the materials are sent to other locations. The screened glass will be sent to a processor and the other materials will be sent to Rumpke's Cincinnati MRF, which processes 27 tons per hour. Rumpke processes glass bottles & jars, aluminum & steel cans, plastic bottles & jugs, mixed paper, cardboard, and cartons.

APPENDIX I

CONCLUSIONS, PRIORITIES, AND PROGRAM DESCRIPTIONS

APPENDIX I Conclusions, Priorities, and Program Descriptions

The District's 2018 Plan was developed to meet the State of Ohio 2009 State Plan goals. To fulfill the directives in Ohio Revised Code Section 3734.50, the SWMD's Plan must demonstrate having strategies and programs in place to address all of the required goals. This 2024 Plan is prepared to meet compliance with the State of Ohio 2020 State Plan. In accordance with the 2020 State Plan, a SWMD must prepare a solid waste management plan that ensures the SWMD makes progress toward achieving the following ten goals:

Goal #1

- The SWMD shall ensure that there is adequate infrastructure to give residents and commercial businesses opportunities to recycle solid waste.

Goal #2

- The SWMD shall reduce and recycle at least 25 percent of the solid waste generated by the residential/commercial sector.

Goal #3

- The SWMD shall provide the following required programs: a Web site; a comprehensive resource guide; an inventory of available infrastructure; and a speaker or presenter.

Goal #4

- The SWMD shall provide education, outreach, marketing and technical assistance regarding reduction, recycling, composting, reuse and other alternative waste management methods to identified target audiences using best practices.

Goal #5

- The SWMD shall incporporate a strategic initiative for the industrial sector into its solid waste management plan.

Goal #6

- The SWMD shall provide strategies for managing scrap tires, yard waste, lead-acid batteries, household hazardous waste and obsolete/end-of-life electronic devices.

Goal #7

- The SWMD shall explore how to incorporate economic incentives into source reduction and recycling programs.

Goal #8

- The SWMD will use U.S. EPA's Waste Reduction Model (WARM) (or an equivalent model) to evaluate the impact of recycling programs on reducing greenhouse gas emissions.

Goal #9

- The SWMD has the option of providing programs to develop markets for recyclable materials and the use of recycled-content materials.

Goal #10

- The SWMD shall report annually to Ohio EPA regarding implementation of the SWMD's solid waste management plan.

Appendix J shows the SWMD's progress to meeting Goal 1 of the 2020 State Plan. To obtain approval from Ohio EPA for the solid waste management plan, the SWMD must demonstrate being able to achieve either Goal 1 or Goal 2. The SWMD demonstrates Goal 1 by demonstrating over 90% of the population has access to recycling infrastructure.

This appendix describes the accomplishments of the strategies/programs and their future direction for the 2024 plan.

A. Actions and Priorities

1. Actions

The evaluation in Appendix H evaluates the SWMD's performance of strategies/programs in offering and maintaining services as outlined in the 2018 plan. The process of evaluation determines whether the performance observed was expected or desired. If these strategies did not perform as desired and challenges were identified, then suggestions were provided to strengthen programs, improve performance, and/or increase effectiveness.

The areas of improvement do not commit the SWMD to undertake every specific action. Making decisions about the District's programs offered during the planning period required valuable input and analyses depicted in Appendix H. The policy committee used the program evaluations detailed in Appendix H to draw conclusions. These conclusions represent what was learned about the District's structure, abilities, strengths and weaknesses, operations, existing programs, outstanding needs, and available resources.

2. Conclusions

Actions that could be implemented are identified in the table below.

Program Name	Program Opportunity	Focus Area for Planning Period
Curbside Recycling Technical Assistance	Engage community stakeholders and determine the barriers they see in their curbside recycling programs.	X
	Offer technical assistance (education, cost analysis, contract assistance, grant writing assistance, face-to-face meetings, etc.) to seek third party grant funding to help overcome challenges. For instance, The Recycling Partnership offers grants for single stream curbside lidded carts. Additionally, Ohio EPA offers Community Grants which could be applied for curbside recycling programs.	X
	Explore volume-based billing rate structures.	

Program Name	Program Opportunity	Focus Area for Planning Period
	Conduct a community survey of citizens/households to build a baseline understanding of program understanding.	
Drop-off Program Improving Availability	Engage community stakeholders with part-time locations to determine the interest in expanding to full-time.	X
	Conduct a user study to determine household interest in more frequent availability.	
Education/Outreach	Develop an outreach plan to encourage recycling.	
	Develop a resource guide to donating.	
	Develop a District social media outreach plan.	X
	Use a variety of methods to reach different audiences including website, regular column entries in newspaper, cable, and television ads, press releases, and brochures.	X
	Develop an inventory of scrap tire take-back retailers, service centers, and automotive shops that accept scrap tires and add it to the District's website.	
	Develop an inventory of retailers that accept electronics and e-waste and add it to the District's website.	
	Include more education on why disposing of these materials properly is important and ways to minimize buying these to begin with.	
Waste Audits	Instead of relying on commercial businesses to contact the SWMD, actively commit to reaching at least 3 businesses a year to conduct a waste audit, help set up recycling programs, etc.	
	Social media posts targeted at businesses.	X
	Adding resources to District website for commercial and industrial businesses.	X
	Explore private sector partnerships.	
School and Institution Outreach	Target working with remaining school districts that do not have recycling programs in place already. Target audience is top management level within the school district.	X
	Continue to provide in-school large area recycling receptacles to existing school participants.	
Government Office Buildings	Many government office buildings serve as drop-off locations. District could set internal recycling procedures and protocols for employees working in the buildings.	
Data Collection Efforts	Obtain and maintain updated contact information for staff managing the industrial recycling	X

Program Name	Program Opportunity	Focus Area for Planning Period
	programs and build a repour in hopes to attain yearly responses. Continue to promote and advertise annual survey participation.	
	The District could make a concerted effort to improve data collection by updating the list of businesses to survey, include online links and QR codes to surveys on material distributed, create a link to the survey on the District website, and conduct outreach and follow-up communications with surveyed entities.	X
Business and Industry Outreach	Connect with local businesses and economic partners to determine the desire for materials management and reporting.	
Public Awareness	Increase signage at recycling locations with what is acceptable versus not.	X
	Send out a mailer describing in easy-to-understand language what is recyclable. and what is not recyclable to all residents.	
Improve and Promote Website	Add education regarding yard waste and food waste diversion methods on the webpage.	
Scrap Tires	The District could consider adding a minimal user charge for residents dropping off tires at collection events to help offset part of the cost needed to run these events, while also ensuring cost is not prohibiting participation.	
	Improve on existing grant fund acquisition for scrap tire collection events.	X
Evaluate HHW Opportunities	Research and evaluate and partnerships that are possible to achieve within or neighboring the District. The District has not had a HHW collection event in the past five years. A long-term option could be to look into a regional partnership with other Districts or commercial businesses that accept HHW. HHW collection is an issue for many Districts who face similar challenges and high costs of collection events. The potential partnership could seek to develop strategies to overcome the challenges of transportation, proper disposal, and expensive costs.	X

District staff met in a working session to explore the list of opportunities, the budget, staffing resources, and the planning period. The program opportunities marked with “X” were selected as focus areas for this next 5-year planning cycle.

3. Priorities

The District diverted 18% in the residential/commercial sector in 2020 and from 2016 to 2019, historically hovered at 19% diversion. This Plan Update analyzed which materials are being landfill, by applying national waste composition data. From the analysis, the District is able to estimate a diversion capture rate of about 43% for paper (includes cardboard) and 13% for organics. Not calculated is the diversion capture rate for plastics, but the District believes that plastics capture rate is low as a result of accepting only plastic bottles and jugs as well as the inconsistency for plastic collection.

One area to help increase capture rates of materials is alignment and focus on education and outreach. Education and outreach would help the District to better promote programs and encourage participation in the programs.

To maintain effectiveness and growth in the programs the District identified areas to modify or enhance the current programs. In addition to the focus areas identified in the above table, priority areas to focus future efforts for the 2024 plan are as follows:

Priority Program	Priority Area
Environmental Education	Teaching students, the importance of recycling in their younger years, they learn responsibility, to act, and to share their knowledge with others in their community.
Digital Marketing Campaign	Campaign targeting residents using social media platforms.

B. Programs

Residential Recycling Infrastructure

Curbside Recycling Services

Non-Subscription Curbside Recycling

ID	Name	Start Date	End Date	Goal(s)
NSC-1	New London Village	Ongoing	Ongoing	1 and 2

The Village of New London's Sanitation Department provides non-subscription curbside recycling to residents in the village and township. New London Village serviced 867 households in 2020. Village customers, cardboard, newspaper, aluminum cans, and steel cans are accepted. The Village used to accept glass and plastic but was unable to continue including the materials due to cost and staffing limitations. This community was serviced by Gateway (cardboard collection) and Milliron (metal collection).

Target for Next 5 Years: The District anticipates the Village of New London will continue this program through the planning period.

ID	Name	Start Date	End Date	Goal(s)
NSC-2	Norwalk City	Ongoing	Ongoing	1 and 2

Source: 2020 Huron ADR

The City of Norwalk's Sanitation Department operates a non-subscription curbside recycling program. The following materials are accepted:

- Glass food and beverage containers (any color)
- Aluminum food and beverage cans
- #1 thru #7 plastics
- Steel/bi-metal food and beverage cans
- Mixed paper, including newspaper, office paper, magazines
- Corrugated cardboard

The City of Norwalk's curbside recycling program has some volume-based components. Each week, residents are permitted to set out an unlimited quantity of recycling and up to 3 cans or bags of waste per household. Cans or bags of waste cannot exceed 33 gallons in size or weigh more than 40 pounds each.

Stickers must be placed on each bag of waste that exceeds the three bag/can limit and bulky items. Stickers for excessive waste cost $3.00 and bulky large item stickers cost $10.00. The stickers may be purchased at the Utility Billing Window at City Hall located at 38 Whittlesey Avenue during normal business hours (8AM-4:30PM).

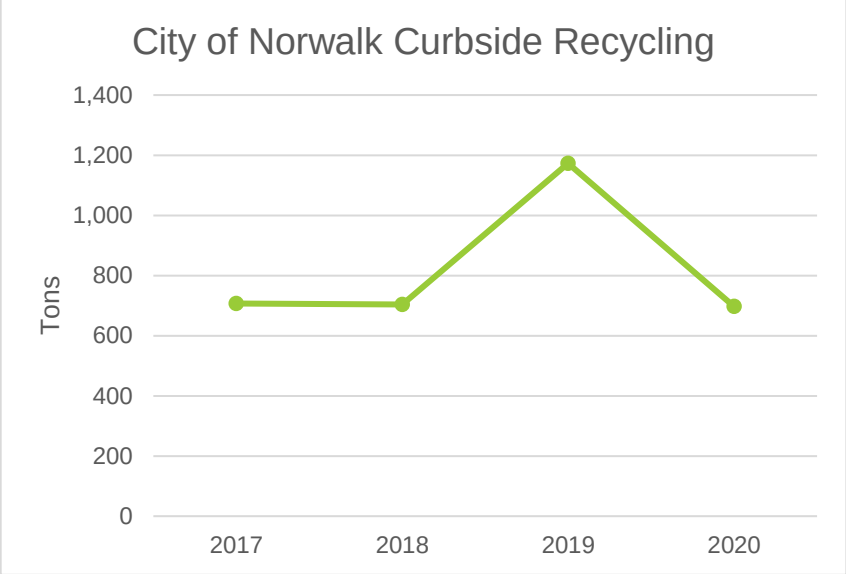
Trash and bulky items (furniture, mattress, large items) are collected weekly with two routes per day for each day of the week (Monday-Friday). Each route utilizes a rear load packer truck with two employees.

Recycling must be placed in trash bags and identified with a yellow tag, which can be obtained for no cost at City Hall or numerous stores throughout town. Large amounts of cardboard may be flattened and bound instead of bagged.

City crews collect recyclables (paper, plastic, glass, steel, and aluminum cans) weekly with two routes per day for each day of the week (Monday-Friday). Each route utilizes a rear load packer truck with one full time employee. One route collects only paper products, and the other route collects commingled recyclables (plastic, glass, steel, and aluminum cans).

Residents place their paper products (cardboard, newspaper, junk mail, magazines) in a City-provided 18-gallon recycling bin. Commingled recyclables can be placed into any plastic garbage bag but must have a separate recycling sticker to indicate that the bag contains recyclables and not trash. Norwalk City serviced 6,952 households in 2020.

The City services single family homes, mobile homes, and multi-family homes up to 3 units. All residential households that are 4 units or more are considered commercial and are not picked-up by the City. Residents are provided with manual collection services for garbage (or trash), and recyclables each week, and weekly collection of yard waste from May through October. In addition, the Streets Department provides leaf collection in the fall. Bulk items are also collected on the trash routes.



The City of Norwalk transports all materials collected from the curbside recycling and waste program to the Huron County Transfer Station.

The City of Norwalk provides recycling education to residents on its webpage: https://www.norwalkoh.com/sanitation

Fees for the Sanitation Department's services, which also include seasonal yard waste, brush, and leaf collection, are funded by a 0.25% income tax.

Target for Next 5 Years: The District anticipates the City of Norwalk will continue this program through the planning period.

Subscription Curbside Recycling

ID	Name	Start Date	End Date	Goal(s)
SC-1	Wakeman Village	Ongoing	Ongoing	1 and 2

Source: 2020 Huron ADR

The District had one subscription service in the reference year. Republic Services offers subscription curbside recycling in the Village. The following materials are accepted:

- Glass food and beverage containers (any color)
- Aluminum food and beverage cans
- #1 thru #7 plastics
- Steel/bi-metal food and beverage cans
- Mixed paper, including newspaper, office paper, magazines
- Corrugated cardboard

Recycling data for the Village is not reported. Wakeman Village serviced 225 households.

Target for Next 5 Years: The District anticipates the Village of Wakeman's program will continue through the planning period.

Full-Time, Urban Drop-offs

ID	Name	Start Date	End Date	Goal(s)
FTU-1	Norwalk City County Offices	Ongoing	Ongoing	1 and 2
FTU-2	Norwalk City County Dog Warden/Shady Lane	Ongoing	Ongoing	1 and 2
FTU-3	Willard City – Huron County Transfer Facility	Ongoing	Ongoing	1 and 2

Source: 2020 Huron ADR

The District maintained three full time urban drop-off locations in the reference year. Collectively, total drop-off program collected 977 tons of material to recycle in 2020. The District owns the recycling containers. Containers are set up to collect three streams of source separated materials: paper, cardboard, aluminum cans, and metal containers. Source separated drop-offs do not accept plastic or glass.

These three locations are available full-time. Full-time means the drop-off was open for at least 40 hours per week.

The drop-off locations are displayed on the District's website in order to inform the residents about specific location information. The website provides what material is accepted at each location and the hours of operation for the drop-off. The website also provides a more detailed page about household hazardous waste material and best practices for how to dispose of that material responsibly and sustainably, to prevent it going to the landfill.

The District monitored the following key operational areas:

- Location of drop-off
- Collection hours
- Material accepted
- Participant feedback on program
- Estimated tonnage collected
- Excessive abuse of drop-off sites from contamination or dumping
- Underutilization of drop-off bins

- Collection frequency that does not meet public needs (i.e. issues with over-flow)

Based on this continual monitoring process, the District adjusted the drop-off program on an as-needed basis when improvements were identified or changes are required including the need to move, create or eliminate a site are recommended. Any changes to the drop-off program in the District will be made to ensure that the District has an 80% or greater recycling access credit.

Target for Next 5 Years: Continue through the planning period.

Part-Time, Urban Drop-offs

ID	Name	Start Date	End Date	Goal(s)
PTU-1	Willard City - Waste Water Treatment Plant	Ongoing	Ongoing	1 and 2
PTU-2	Willard City - New Haven Township Hall	Ongoing	Ongoing	1 and 2
PTU-3	Willard City - Norwich Township Hall	Ongoing	Ongoing	1 and 2
PTU-4	Willard City - Richmond Township Hall	Ongoing	Ongoing	1 and 2

Source: 2020 Huron ADR

The District provided containers and serviced four part time urban drop off locations in the reference year. Part-time drop-offs were typically available for a few days each month. PTU-1, PTU-2, and PTU-3 were open one day a month, every other month. PTU-4 was open Wednesday 11:00am – 1:00pm and Saturday and Sunday from 12:00pm to 1:00pm.

PTU 1 collected materials in source separated multi-stream and accepts:

- Aluminum food and beverage cans
- #1 thru #2 plastics
- Steel/bi-metal food and beverage cans
- Mixed paper, including newspaper, office paper, magazines
- Corrugated cardboard

PTU 2, PTU 3, and PTU 4 collected materials in a single stream. PTU 2 and PTU 4 collect the above listed materials. PTU 3 accepts all the above except for plastics.

The drop-off locations are displayed on the District's website in order to inform the residents about specific location information. The website provides what material is accepted at each location and the hours of operation for the drop-off. The website also provides a more detailed page about household hazardous waste material and best practices for how to dispose of that material responsibly and sustainably, to prevent it going to the landfill.

Target for Next 5 Years: Continue through the planning period.

Full-Time, Rural Drop-offs

ID	Name	Start Date	End Date	Goal(s)
FTR-1	Greenwich Village – Admin Building	Ongoing	Ongoing	1 and 2
FTR-3	New London Village Hall/ Water Plant	Ongoing	Ongoing	1 and 2

Source: 2020 Huron ADR

The District provided and serviced two full time rural drop off locations in the reference year. FTR-1 and FTR-3 had two containers on site that collected paper, cardboard, and cans. FTR-2 was discontinued before 2020 but and is not identified in the above table.

FTR 1 collected materials in a single stream and accepts:

- Aluminum food and beverage cans
- Steel/bi-metal food and beverage cans
- Mixed paper, including newspaper, office paper, magazines
- Corrugated cardboard

FTR 3 collected materials source separated multi-stream and accepts paper only.

These three locations are available full-time. Full-time means the drop-off was open for at least 40 hours per week.

The drop-off locations are displayed on the District's website in order to inform the residents about specific location information. The website provides what material is accepted at each location and the hours of operation for the drop-off. The website also provides a more detailed page about household hazardous waste material and best practices for how to dispose of that material responsibly and sustainably, to prevent it going to the landfill.

Target for Next 5 Years: Continue through the planning period.

Part-Time, Rural Drop-offs

ID	Name	Start Date	End Date	Goal(s)
PTR-1	Bellevue – Lyme Township Hall	Ongoing	Ongoing	1 and 2
PTR-2	Collins – Hartland Township Hall	Ongoing	Ongoing	1 and 2
PTR-3	Norwalk Township – Norwalk Township Hall	Ongoing	Ongoing	1 and 2
PTR-4	Lyme Township	Ongoing	Ongoing	1 and 2

PTR-5	Monroeville – Ridgefield Township Hall	Ongoing	Ongoing	1 and 2
PTR-6	Norwalk City – Bronson Township Building	NA	2018	1 and 2
PTR-7	Wakeman Township/Village – Wakeman Village Hall	Ongoing	Ongoing	1 and 2

Source: 2020 Huron ADR

The District provided and serviced six part time rural drop off locations in the reference year. The city of Norwalk was considering adding a seventh drop off location at the Norwalk City Hall, however this never came to fruition.

All six locations accept:

- Aluminum food and beverage cans
- Steel/bi-metal food and beverage cans
- Mixed paper, including newspaper, office paper, magazines
- Corrugated cardboard

The only location collecting single stream is PTR 1.

The locations above had various hours of operation. Most locations were open one day a month, with each location being staggered from the others apart from PTR-4 which was open for two days every month.

The drop-off locations are displayed on the District's website in order to inform the residents about specific location information. The website provides what material is accepted at each location and the hours of operation for the drop-off. The website also provides a more detailed page about household hazardous waste material and best practices for how to dispose of that material responsibly and sustainably, to prevent it going to the landfill.

Target for Next 5 Years: Continue through the planning period.

Name	**Start Date**	**End Date**	**Goal**
Curbside Recycling Technical Assistance	2018	Ongoing	1 and 2

The District will provide technical assistance to cities, villages, or townships that express interest in implementing a curbside recycling program. Technical assistance to political subdivisions may include the following:

- Support with the development of requests for proposals from service providers (haulers).
- Attending public meetings to answer questions from residents.

- Assistance with coordinating a consortium bidding process amongst multiple interested political subdivisions within Huron County.
- Providing information to public officials on curbside recycling funding options.
- Education assistance and outreach campaigns.

In 2020, COVID restrictions paused any activity for curbside technical assistance. As COVID restrictions lessened, the District was available to present at any of the township trustee or city council meetings. However, no requests were made. The City of Norwalk as well as township trustee representatives sit on the policy committee board and participate in meetings. Representatives from the City of Norwalk call the District as needed.

The District will make political subdivisions aware of the availability of this technical assistance by adding a section to its website specifically for community officials. This was not completed in the last plan update.

Target for Next 5 Years: District will direct outreach and target to work with one community year to provide technical assistance.

Name	**Start Date**	**End Date**	**Goal**
Drop-off Location Expansion	2018	Ongoing	1 and 2

Additional drop-off sites may be needed based on identification of underserved areas of the County.

The District will begin discussions with communities to determine if a proposed new drop-off site development is feasible. If the District and community agree and an appropriate site is identified, the District will implement the drop-off site. In 2020, the District reached out to communities offering mini grants, but there was no interest in expanding the drop-off program. In 2021, with limited funding this program had no activity.

Expansion plans also included expanded availability of drop-offs currently available during only even or odd months. The District decided it was best to first conduct a drop-off study before expanding available hours. The District's budget has prohibited any improvements from being made in recent years.

Notifications to District communities and or residents of activities, promotions, changes in programs, opportunities to recycle or other communication initiatives will occur through mail, newspaper advertisements, newsletters, web site announcements, public service announcements or other mechanisms utilized by the District and or its partners.

Target for Next 5 Years: Conversations occur at least yearly with one or more elected officials to explore expanding drop-off locations. The cost is the main challenge for the adding communities and expansion.

Name	Start Date	End Date	Goal
Drop-off Initiative Program Consistency	2018	Ongoing	1 and 2

The District's drop-off locations are not consistent across each location as to the materials accepted. The District was looking to bring more consistency to the materials accepted at sites where limited materials are accepted so all sites will accept the same materials. Materials accepted will include cardboard, newspaper, mixed paper, plastic (#1 and #2), paper, cardboard, aluminum cans and tin/steel cans.

With COVID 19 pandemic during 2020 the District held off on making any changes to the drop-off program and will revisit this during the next planning period.

Target for Next 5 Years: Throughout the next planning period the District will continue to update and maintain signage at drop-off locations. Signs will clearly mark which materials are accepted at the specific location. Graphic consistency will be a key focus.

Name	Start Date	End Date	Goal
Drop-off Efficiency Study	2018	2023	1 and 2

The District planned to conduct a detailed cost accounting of the drop-off program operation to determine the exact cost to operate the program. The study would also look at the costs of private sector operations and with the following collection and recycling formats:

- Rear load compactor collection with single stream recycling
- Rear load compactor collection with dual stream recycling
- Front load compactor collection with single stream recycling
- Front load compactor collection with dual stream recycling
- Roll-off boxes with single stream recycling
- Roll-off boxes with dual stream recycling with revenue
- Roll-off boxes with dual stream recycling without revenue

- Other collection system and recycling system as identified during the study

The study will help determine if a change in the drop-off program operation should be made and when. This study was planned for 2019 and 2020 but due to limited funding was placed on hold.

Target for Next 5 Years: Program will not be conducted in the next planning period.

Commercial/Institutional Sector Reduction and Recycling Programs

Waste Assessments/Waste Audits

Name	Start Date	End Date	Goal
Waste Assessments	Ongoing	Ongoing	1 and 2

Source: 2020 Huron ADR

The District offers waste audits and assessments upon requests to businesses for no charge. Following an audit or assessment, the District identifies opportunities for maximizing waste diversion and discusses customized strategies for implementing or expanding recycling activities. However, in the reference year there were no requests made to the District.

Target for Next 5 Years: Resources specific to commercial and industrial businesses will be added to District website. Social media post will also target this audience sector. The District will research the development of a waste audit toolkit. If developed it will be added to the webpage as a resource.

Name	Start Date	End Date	Goal
School Drop-Off Recycling	Ongoing	Ongoing	1 and 2

In addition, the District provides weekly recycling to the following schools in the City of Norwalk:

- Norwalk Middle School
- Main Street School
- League Street School
- Norwalk High School

Limited material drop-offs were available at New London High School and Western Reserve High School. Limited material drop-offs describe recycling sites that accept less

than the required number of materials to be counted toward the goal of providing recycling opportunities to at least 80% of the community. New London High School collected mixed paper and metal cans; Western Reserve High School collected paper and cardboard.

Target for Next 5 Years: Continue through the planning period.

Industrial Sector Reduction and Recycling Programs

Waste Assessments/Waste Audits

Name	Start Date	End Date	Goal
Waste Assessments	Ongoing	Ongoing	1 and 2

Source: 2020 Huron ADR

The District offers waste audits and assessments upon request to industrial businesses for no charge. Following an audit or assessment, the District identifies opportunities for maximizing waste diversion and discusses customized strategies for implementing or expanding recycling activities. However, in the reference year there were no requests made to the District.

Target for Next 5 Years: Continue through the planning period.

Restricted/Difficult to Manage Wastes

Yard Waste

Name	Start Date	End Date	Goal
Yard Waste Management	Ongoing	Ongoing	6

Source: 2020 Huron ADR

The City of Norwalk and Village of Wakeman both operate yard waste collection programs. The City of Norwalk offers a non-registered yard waste drop-off, and the Village of New London (112.2 tons), Village of Greenwich (87.4 tons), Sand Road Enterprises (185.3 tons), and Corso's Perennials (62.04 tons) each operated a Class IV compost site in 2020. A total of 447 tons of yard waste was collected.

In 2020, there were four registered compost facilities used. All four of the sites were Class IV facilities.

Currently, the Class IV Huron County Compost Facility is used only as a collection site. The yard waste delivered to the site is transported to a third-party compost facility. Yard waste was collected here in 2020 and sent to Barnes Nursery in Erie County. The transfer station only charges $20/ton of yard waste, compared to a higher fee for waste sent to the landfill. The facility collected 59.67 tons of yard waste in 2020.

Target for Next 5 Years: Continue through the planning period.

Household Hazardous Waste

Name	Start Date	End Date	Goal
Household Hazardous Waste Management (change program name from Household Hazardous Waste Collection Program)	Ongoing	Ongoing	6

Source: 2020 Huron ADR

The District annually evaluates whether opportunities for partnerships may allow the District to offer household hazardous waste (HHW) collection events. In 2020, the District was unable to host an HHW collection due to budgetary constraints.

Proper HHW disposal information is provided to residents through the District's publications and phone inquiries. The District also maintains a list of locations that accept used oil. This list was incorporated in the District's educational materials and also available upon request.

Target for Next 5 Years: The District will continue to explore economical and feasible management which may be collection in the future but at this short-term has not been feasible.

Scrap Tires

Name	Start Date	End Date	Goal
Scrap Tire Management	Ongoing	Ongoing	6

Source: 2020 Huron ADR

The Scrap Tire Program provides permanent scrap tire collection at the transfer facility for a fee. A total of 30.66 tons of scrap tires were collected at the transfer facility in 2020. Bi-annual scrap tire collection events occur in odd-numbered years when grant funding is available. The District applies for grants to fund special collection events. Grant funding was last received in 2017 and held at the Huron County Fairgrounds to collect scrap tires. There were no collection events hosted by the District in 2020.

Target for Next 5 Years: Improve on existing grant fund acquisition for scrap tire collection events by applying for Ohio EPA's grant funds. Also look to other grant opportunities that could support collection events.

Electronic Equipment

Name	Start Date	End Date	Goal
Electronic Recycling Management	Ongoing	Ongoing	6

Source: 2020 Huron ADR

The District referred residents to Goodwill, Christy Lane Industries, and Mid-Ohio Electronics to recycle e-waste. The District accepted electronics at the Transfer Station that are commingled with trash loads. The District does not collect any electronics at the transfer station for recycling.

The District planned to evaluate options for collecting source separated electronic waste at the transfer station in 2018. The District did not identify an R2 licensed and certified processor that is cost effective, to implement a program. If the District finds this program can occur without substantial costs, then the District will consider implementing it.

Notifications to District communities and or residents of activities, promotions, changes in programs, opportunities to recycle or other communication initiatives will occur through mail, newspaper advertisements, newsletters, website announcements, public service announcements or other mechanisms utilized by the District and or its partners.

Target for Next 5 Years: Continue through the planning period.

Lead-Acid Batteries

Name	Start Date	End Date	Goal
Battery Management	Ongoing	Ongoing	6

Source: 2020 Huron ADR

A permanent collection of lead-acid batteries exists at the transfer facility, available year-round at no charge. A total of 1.13 tons of LABs were collected at the transfer station in 2020. The Battery Recycling Program maintains and distributes a list of lead-acid battery recyclers and information for cell phone and rechargeable battery outlets.

Target for Next 5 Years: Continue through the planning period.

Appliances

Name	Start Date	End Date	Goal
Appliance Management	Ongoing	Ongoing	6

Source: 2020 Huron ADR

White goods are collected year-round at the transfer station. In 2020, 112.42 tons of ferrous metals including appliances were collected at the transfer station. Most appliances are accepted for no charge. Appliances containing Freon such as refrigerators, freezers, and dehumidifiers are accepted for a fee of $20.00 per item. The Huron County HVAC technician is registered to remove Freon from appliances.

Target for Next 5 Years: Continue through the planning period.

Other Material Specific Programs

Used Oil

Name	Start Date	End Date	Goal
Used Oil Recycling Program	Ongoing	Ongoing	6

Source: 2020 Huron ADR

The Used Oil recycling Program provides a list of locations that accept used oil for recycling in brochures. The District maintains this list of locations updating annually. This list was incorporated in the District's educational materials and available upon request.

Target for Next 5 Years: Continue through the planning period.

Enforcement & Clean-Up

Litter and Clean-Up

Name	Start Date	End Date	Goal
Litter and Community Clean-Up	Ongoing	Ongoing	n/a

Some communities host their own community clean-up days with the support of the District. The District provides gloves, vests, and supplies to volunteer clean-up groups.

Target for Next 5 Years: Continue through the planning period.

Funding/Grants

Incentive Based Grants

Name	Start Date	End Date	Goal
Recycling Incentive Grant	Ongoing	2021	n/a

Source: 2020 Huron ADR

The District offered a Recycling Incentive Grant that provided financial assistance to the city of Norwalk to aid with the curbside recycling program. The District supported the City of Norwalk's curbside program when requested. $10,000 was provided in 2018. Approximately 6,952 households were served in 2020.

Target for Next 5 Years: Discontinued.

Improvement Grants

Name	Start Date	End Date	Goal
Community Grant	2018	2023	n/a

Source: 2020 Huron ADR

To offer recycling expansion to other communities the District offered financial assistance to all political subdivisions. A grant manual was created in late 2018 and early 2019 to administer the grant program. The grant manual was approved by the Policy Committee and distributed to communities. Decreased sources of revenue to fund this project has stopped it from being executed.

All District political subdivisions interested in financial assistance for qualified recycling programs will have to complete an application each year for the funding under the new program grant guidelines. The grant program will be considered a competitive process for all grant applications submitted on a yearly basis.

The main criteria of the grant program will be the following:

- To create curbside recycling programs through competitively bid contracts with the private sector
- To grow and improve existing curbside recycling programs
- To create new recycling drop-off programs
- To grow and improve existing recycling drop-off sites

The final grant criteria will be developed by the District and included in a grant application document. All programs listed above must meet the minimum recycling access standards listed in Appendix J of this Plan Update.

Trash collected from any curbside contract or program would need to be delivered to the Huron County Transfer Station per the flow control requirements of the District.

Recyclables collected may be processed by any third-party processor or delivered to the Huron County Transfer Station. Grant funds will be one-time annual project specific grants. Potential grant funding can be used for the following:

- Recycle containers for qualified recycling access curbside or drop-off programs
- Advertisement and promotion for qualified recycling access curbside and drop-off recycling programs
- Contract bid document preparation for qualified recycling access curbside and drop-off private sector services
- Recyclables processing and transportation costs for qualified, publicly operated recycling access curbside and drop-off program recyclables delivered to the District Transfer Station or third-party material recovery facility

The District may consider other funding options as determined by the District based on grant applications that are submitted. The maximum grant application amount shall not exceed $40,000 unless approved by the Policy Committee. The annual expenditure for this program shall be capped at $55,000. Unused grant funds from previous grant years can be rolled over to future years at the discretion of the Policy Committee.

Because this grant program is designed for all District political subdivisions, the District Policy Committee, who represents all District political subdivisions, will annually review submitted grant applications and award grants that meet the requirements of the program and that fit within the budget detailed for this program in Appendix O.

*The District Policy Committee will evaluate the effectiveness of the grant program during the development of the next solid waste plan update to determine if the program will continue, change, expand or retract.

Target for Next 5 Years: Due to a low fund balance the District is not budgeting funds to the Community Grant during the next 5 years.

Data Collection

Name	Start Date	End Date	Goal
Data Collection Efforts	Ongoing	Ongoing	2

Source: 2020 Huron ADR

The District's Survey Strategy is used to assess commercial and industrial recycling levels, support District planning efforts, and effectively focus education efforts. At a minimum, the commercial and industrial businesses will be surveyed before each plan update. Surveying was conducted in 2021 for the 2020 calendar year. There were 52 industrial surveys and 290 commercial surveys mailed out.

Target for Next 5 Years: Continue through the planning period.

District Facilities

Name	Start Date	End Date	Goal
Huron County Transfer Facility/Landfill	Ongoing	Ongoing	n/a

The Huron County Commissioners own and operate the Huron County Transfer Facility. The Huron County Transfer Facility is the designated facility. The Transfer Facility also holds a Class IV composting registration. Yard waste, brush, and grass clippings are accepted at the composting facility. At this time, no composting operations occur, rather the yard waste materials delivered to the site are staged and then transported to a third-party yard waste facility. The District reserves the right to operate the facility either as a compost site or a transfer site based on economics, volume, or other factors. There were no challenges identified.

Target for Next 5 Years: Continue through the planning period.

Name	Start Date	End Date	Goal
Punch Card Program	Ongoing	Ongoing	n/a

Many townships in Huron County stopped providing curbside waste and recycling collection. To assist residents of these townships, the District implemented an alternative program by installing a central drop box for waste disposal and recycling at the transfer station. The system is accounted for through punch cards which are provided by the participating communities. The District does not operate the punch card system. The following summarizes the details of the program:

- Punch cards are issued through the township.
- Townships are charged each month for the trash brought in by residents through the program. The charge is issued against the purchased punch cards for each individual township.
- Punch cards do not expire, some cards have been used that are over 5 years old.
- Residents receive a punch card good for five punches annually.
- Residents may dispose of up to 250 pounds of trash per punch.
- Recyclables brought to the transfer station drop-box are free of charge.

- Punch card costs varies by community. The District does not charge the residents directly for the punch cards or for the disposal of waste.
- The number of punch cards provided by the communities to their residents is not known by the District.

The amount of solid waste and recyclables delivered by residents using the punch card system is not tracked.

Target for Next 5 Years: Continue through the planning period.

APPENDIX J

REFERENCE YEAR OPPORTUNITY TO RECYCLE AND DEMONSTRATION OF ACHIEVING GOAL I

APPENDIX J Reference Year Opportunity to Recycle and Demonstration of Achieving Goal 1

A. Residential Sector Opportunity to Recycle

The 2020 State Solid Waste Management Plan requires SWMD's to demonstrate adequate infrastructure to provide at least 80% of the residential population in a County with convenient opportunities to recycle. The SWMD must demonstrate one of the following:

a. Demonstrate that there was adequate infrastructure in the reference year to provide at least 80% of the residential population within each county of the SWMD the opportunity to recycle.
b. Demonstrate that the SWMD will implement new and/or upgraded recycling infrastructure sufficient to provide at least 80% of the residential population within each county of the SWMD the opportunity to recycle.
c. Apply for a waiver from Ohio EPA to provide less than 80% of the residential population with opportunities to recycle.

The SWMD must ensure that there will be adequate infrastructure throughout the entire planning period covered by the solid waste management plan to give at least 80% of the residential population in each county of the SWMD the opportunity to recycle.

Additionally, the SWMD must:

1) Demonstrate that the SWMD will meet the applicable standards established in the Format for the remainder of the planning period.
2) Calculate the solid waste reduction and recycling rate for the residential/commercial sector. If less than 25% in the reference year, then demonstrate achieving annual increases in the solid waste reduction and recycling rate for the residential/commercial sector.
3) Demonstrate that commercial and institutional generators of solid waste have adequate opportunities to recycle solid waste.
4) Demonstrate that the SWMD will encourage participation in available recycling infrastructure.
5) Demonstrate that the SWMD will maintain the required infrastructure throughout the entire planning period.

Technical elements of the demonstration include:

1) Components of the residential infrastructure must collect at least 5 materials from a specified list in Format 4.1.
2) The SWMD must demonstrate that the commercial sector has adequate opportunities to collect at least 5 materials from a specified list in Format 4.1.
3) Format 4.1 will specify the "credits" for various types of infrastructure. The amount of the credit assigned is dependent upon the type of recycling service being provided.

- Non-Subscription Curbside: Credit the entire population of each community.
- Subscription Curbside: Credit 25% of the community population.
- Full-Time Urban Drop-off: Credit 5,000.
- Full-Time Rural Drop-off: Credit 2,500.
- Part-Time Urban Drop-off: Credit 2,500.
- Part-Time Rural Drop-off: Credit 2,500.

4) The following minimum standards apply to drop-offs:
   - Residents can easily find and access the site.
   - All drop-off sites must provide a minimum of 6-cubic yards of capacity.
   - There are signs that are adequate to, at a minimum:
     i. Direct the public to the site or indicates the location of the site;
     ii. Lists the materials that are accepted; and
     iii. Provide days and hours of operation
   - The SWMD has made a reasonable attempt to meet the demand of the population for use of the drop-off site.
5) "Credit" for infrastructure in a community is limited to the population of an entire community, up to and including the entire credit for a drop-off that would be needed to achieve 100% of the residential population with access to recycling infrastructure.

Table J-1. Opportunity to Recycle

ID #	Huron Name of Community (City, Village, Township)	2020 Community Population	2020 Population Credit	2024 Community Population	2024 Population Credit	2038 Community Population	2038 Population Credit
Non-subscription curbside							
NSC1	New London Village	2,352	2,352	2,330	2,330	2,254	2,254
NSC2	Norwalk City	16,827	16,827	16,668	16,668	16,122	16,668
Subscription curbside							
SC1	Wakeman Village	1,030	257	1,020	255	986	247
Full-time, urban drop-off							
FTU1	Norwalk City, Huron County Administration Building	16,827	Not Creditable	16,668	Not Creditable	16,122	Not Creditable
FTU2	Norwalk City, Dog Warden	16,827	Not Creditable	16,668	Not Creditable	16,122	Not Creditable
FTU3	Willard City, Huron County Transfer Facility	6,002	5,000	5,945	5,000	5,750	5,000
Part-time, urban drop-off							
PTU1	Willard Wastewater Treatment	6,002	2,500	5,945	2,500	5,750	2,500

ID #	Huron Name of Community (City, Village, Township)	2020 Community Population	2020 Population Credit	2024 Community Population	2024 Population Credit	2038 Community Population	2038 Population Credit
PTU2	Willard City New Haven Township Hall	6,002	Not Creditable	5,945	Not Creditable	5,750	Not Creditable
PTU3	Willard City, Norwich Township	6,002	Not Creditable	5,945	Not Creditable	5,750	Not Creditable
PTU4	Richmond Township Hall	1,060	Not Creditable	1,050	Not Creditable	1,016	Not Creditable
Full-time, rural drop-off							
FTR1	Greenwich Recycling Box (Downtown Greenwich)	1,419	2,500	1,405	2,500	1,359	2,500
FTR2	Monroeville, Greenfield Township Hall	1,347	2,500	1,334	2,500	1,290	2,500
FTR3	New London, Village Hall	2,352	Not Creditable	2,330	Not Creditable	2,254	Not Creditable
Part-time, rural drop-off							
PTR1	Hartland Township	1,066	2,500	1,056	2,500	1,022	2,500
PTR2	Norwalk Township	3,373	2,500	3,341	2,500	3,232	2,500
PTR3	Lyme Township	836	2,500	828	2,500	801	2,500
PTR4	Ridgefield Township	2,281	2,500	2,259	2,500	2,185	2,500
PTR5	Bronson Township Hall	16,827	2,500	16,668	2,500	16,122	2,500
PTR6	Wakeman Township Village Hall	1,030	2,500	1,020	2,500	986	2,500
Mixed municipal waste material recovery facility							
None							
Total County Population		53,830		53,266		51,954	
Total Population Credit		46,937		44,253		44,168	
Percent of Population		87%		83%		85%	

Note: County population adjusted to exclude Bellevue, Milan, and Plymouth (see Appendix C for explanation).

"Credit" for infrastructure in a community is limited to the population of an entire community, up to and including the entire credit for a drop-off that would be needed to achieve 100% of the residential population with access to recycling infrastructure. Therefore, Norwalk City and Willard City have values denoted as "not creditable" and are not included in the total calculations. Due to the population credit exceeding the population, these locations are not credited at all locations. Norwalk City has 3 locations but is only credited once, Willard City has 4 locations and is credited twice. Richmond Township Hall only has drop-offs located there every other month and is therefore not creditable as a drop-off site. Similarly, New London Village Hall does not meet the

technical requirements of a drop-off. It fails to accept the five materials outlined in format 4.1 and therefore is not creditable.

The SWMD demonstrates at least 80% of the residential population in the SWMD have the opportunity to recycle. With a projected decreasing population, the percentage of residents who have the opportunity to recycle is projected to remain above 80%.

B. Commercial Sector Opportunity to Recycle

Table J-2 Demonstration of Commercial Opportunity to Recycle

Service Provider	Type of Recycling Service Provided	Cardboard	Office Paper	Mixed Paper	Steel Containers	Aluminum Containers
City of Norwalk	Hauler Collection	X	X	X	X	X
Republic	Hauler Collection	X	X	X	X	X
Norwalk Waste	Hauler Collection	X	X	X	X	X
Village of New London	Hauler Collection	X	X	X	X	X
Rumpke	Hauler Collection	X	X	X	X	X

The SWMD obtains data for commercial infrastructure to meet Goal 1 from recycling services that offer collection to commercial/industrial generators throughout the county. The five service providers above met the minimum material requirements: cardboard, office paper, mixed paper, steel containers, aluminum cans.

C. Demonstration of Meeting Other Requirements for Achieving Goal 1

1. Residential/Commercial Waste Reduction and Recycling Rate

   To achieve Goal 1 the SWMD must show that the District achieved a 25% residential/commercial waste reduction and recycling rate or that the District will achieve annual reduction rate increases during the planning period. Appendix K calculates the residential/commercial solid waste reduction and recycling rate for the reference year and planning period. The reference year rate is 17.96%. Appendix K calculates that the future rate will decrease throughout the planning. The diversion rate is not the only indicator of waste reduction and recycling efforts. The drop-off and curbside programs are providing a high recycling compliance for access averaging 90% access. Diversion is projected to increase, however, the tonnage landfilled is increasing at a greater rate. Huron County's leading industry sector is agriculture. The total number of business establishments in the county is 1,180[1]. The commercial sector is smaller and it's challenging to capture more data. During this planning period a targeted survey effort will be made to capture

[1] U.S. Census Bureau. County Business Patterns: 2020.

additional commercial sector business information. Programs are described in Appendices I and L.

2. Encouraging Participation

   The District will continue to encourage residents and commercial generators to participate in existing recycling infrastructure. Appendices I and L provide more detail on education and outreach programs anticipated within the planning period.

APPENDIX K

WASTE REDUCTION AND RECYCLING RATES AND DEMONSTRATION OF ACHIEVING GOAL

APPENDIX K. Waste Reduction and Recycling Rates and Demonstration of Achieving Goal 2

Goal 2 of the 2020 Ohio's Solid Waste Management Plan states: "The SWMD shall reduce and recycle at least 25% of the solid waste generated by the residential/commercial sector".

Table K-1 Residential/Commercial Annual Rate of Waste Reduction

Year	Population	Recycled	Disposed	Total Generated	Waste Reduction & Recycling Rate (%)	Per Capita Waste Reduction & Recycling Rate (ppd)
2020	**53,830**	**8,914**	**40,719**	**49,632**	**17.96%**	**0.91**
2021	53,689	8,807	41,776	50,583	17.41%	0.90
2022	53,548	8,809	42,776	51,585	17.08%	0.90
2023	53,407	8,811	43,776	52,587	16.76%	0.90
2024	53,266	8,813	44,776	53,589	16.45%	0.91
2025	53,125	8,816	45,776	54,592	16.15%	0.91
2026	53,890	8,823	46,776	55,599	15.87%	0.90
2027	53,708	8,831	47,776	56,607	15.60%	0.90
2028	53,526	8,828	48,776	57,604	15.33%	0.90
2029	53,344	8,826	49,776	58,602	15.06%	0.91
2030	53,162	8,823	50,776	59,599	14.80%	0.91
2031	52,990	8,894	50,776	59,670	14.90%	0.92
2032	52,818	8,894	50,776	59,670	14.90%	0.92
2033	52,646	8,894	50,776	59,670	14.90%	0.93
2034	52,474	8,894	50,776	59,670	14.90%	0.93
2035	52,302	8,894	50,776	59,670	14.90%	0.93
2036	52,186	8,894	50,776	59,670	14.90%	0.93
2037	52,070	8,894	50,776	59,670	14.90%	0.94
2038	51,954	8,894	50,776	59,670	14.90%	0.94

Source(s):
Population – Appendix C, Table C-1
Recycled – Appendix E, Table E-4 and E-5
Disposed – Appendix D, Table D-3
Sample Calculation:
Total Generated = Recycled + Disposed
Waste Reduction & Recycling Rate = Recycled / Total Generated
Per Capita Waste Reduction & Recycling Rate = (Recycled x 2000 lbs/ton) / (Population x 365 days)

The District achieved nearly an 18% residential/commercial waste reduction and recycling rate in the reference year. This was below the state goal of 25%. As shown in Table K-1, the District's recycling totals are projected to remain steady, but the total waste generated is expected to increase. As a result, the District is projecting the recycling rates to continue to be below the state goal of 25%. The District held projections flat after the seventh year of the planning period.

The previous plan's reference year of 2014 saw a 30% waste reduction and recycling rate, above the 25% state goal. This plan also projected a decrease in waste reduction and recycling until 2020 when it was estimated to remain mostly flat around 26%, still above the state goal. However, as can be seen these projections do not match historical data. The primary difference lies in the differences between the projected recycling and projected landfill disposal numbers. The projected recycling for 2020 was 10,078 and the actual number observed in 2020 was 8,914, a difference of 1,164 tons. The greater difference between projected and actual is in landfill disposal. The 2020 projection was 35,826 and the actual number was 40,719, a difference of 4,893 tons.

Table K-2 Industrial Annual Rate of Waste Reduction

Year	Waste Reduced and Recycled (tons)	Waste Disposed (tons)	Non-Recyclable Waste	Waste Generated (tons)	Waste Reduction and Recycling Rate (percent)
2020	***47,767***	***5,458***		***53,225***	***89.74%***
2021	47,495	7,629		55,124	86.16%
2022	47,224	7,586		54,810	86.16%
2023	46,955	7,543		54,497	86.16%
2024	46,687	7,500		54,187	86.16%
2025	46,421	7,457		53,878	86.16%
2026	46,156	7,414		53,571	86.16%
2027	45,893	7,372		53,265	86.16%
2028	45,632	7,330		52,962	86.16%
2029	45,632	7,288		52,920	86.23%
2030	45,632	7,247		52,878	86.30%
2031	45,632	7,205		52,837	86.36%
2032	45,632	7,164		52,796	86.43%
2033	45,632	7,123		52,755	86.50%
2034	45,632	7,083		52,714	86.56%
2035	45,632	7,042		52,674	86.63%
2036	45,632	7,002		52,634	86.70%
2037	45,632	6,962		52,594	86.76%
2038	45,632	6,923		52,554	86.83%

Source(s):
Recycled – Appendix F, Table F-4 and F-5
Disposed – Appendix D, Table D-3
Sample Calculation:
Total Generated = Recycled + Disposed
Waste Reduction & Recycling Rate = Recycled / Total Generated

The 2020 State Plan removed the requirement from Goal 2 that a SWMD must achieve a 66% industrial reduction and recycling rate. However, as shown in table K-2, the District did achieve this goal by a wide margin. In the reference year the District had an industrial reduction and recycling rate of 89%. The District is projecting this rate to decrease in 2021 and slowly rise after.

The previous plan projected between 89% and 93% through 2032, which was relatively consistent with what was historically observed. The reference year of 2020 was projected to be 92% and was observed to be 89%, only a 3% difference.

In comparison to the previous plan, the industrial sector is projected to recycle between 15,000 and 17,000 tons less per year. The previous plan projected a 2020 industrial recycling of 62,849 tons and the actual 2020 number was 47,767 tons.

Despite the differences in tons recycled, the waste reduction remained close to the projection. This is because the amount of total waste generated is significantly higher than observed. It happens to be that the projected waste reduction rate and the actual reduction rate are proportionally very similar.

Table K-3 Annual Rate of Waste Reduction: Total Solid Waste

Year	Waste Reduced and Recycled (tons)	Waste Disposed (tons)	Waste Generated (tons)	Waste Reduction and Recycling Rate (percent)
2020	***56,681***	***46,177***	***102,857***	***55.11%***
2021	56,301	49,405	105,706	53.26%
2022	56,033	50,362	106,394	52.67%
2023	55,766	51,319	107,084	52.08%
2024	55,500	52,276	107,776	51.50%
2025	55,237	53,233	108,469	50.92%
2026	54,971	54,190	109,161	50.36%
2027	54,775	55,148	109,923	49.83%
2028	54,516	56,106	110,622	49.28%
2029	54,519	57,064	111,584	48.86%
2030	54,522	58,023	112,545	48.44%
2031	54,525	58,981	113,507	48.04%
2032	54,528	59,940	114,469	47.64%
2033	54,532	60,899	115,431	47.24%
2034	54,535	61,859	116,394	46.85%
2035	54,538	62,818	117,356	46.47%
2036	54,542	63,778	118,320	46.10%
2037	54,546	64,738	119,284	45.73%
2038	54,550	65,699	120,248	45.36%

Source:
Recycled – Appendix F, Table F-4 and F-5 and Appendix E, Table E-4 and E-5
Disposed – Appendix D, Table D-3
Sample Calculation:
Total Generated = Recycled + Disposed
Waste Reduction & Recycling Rate = Recycled / Total Generated
Notes: Excludes exempt waste

Overall, when comparing the 2018 plan projections to the actual data, slightly more total waste was projected. The previous plan projected a total recycling and reduction rate to

reach about 66% when it actually only reached 55% and is projected to decrease to 45% by the end of the planning period.

APPENDIX L

MINIMUM REQUIRED EDUCATION PROGRAMS: OUTREACH AND MARKETING PLAN AND GENERAL EDUCATION REQUIREMENTS

APPENDIX L. Outreach and Marketing Analysis

This section discusses State Plan Goals 3 and 4 and the District's strategies to satisfy the requirements of meeting each goal. The following bullet points summarize each goal, as presented in Ohio EPA's Plan Format v4.1:

Goal 3: Waste Reduction and Recycling Rates

- The SWMD shall provide the following required programs:
  - A website
  - A comprehensive resource List
  - An inventory of available infrastructure
  - A speaker or presenter

Goal 4: Outreach and Education - Outreach Plan and General Requirements

- The SWMD shall provide education, outreach, marketing, and technical assistance regarding reduction, recycling, composting, reuse, and other alternative waste management methods to target audiences using best practices.

A. Minimum Required Education Programs

In accordance with Goal 3 of the 2020 State Plan, the District is required to provide four minimum education programs including: (1) a website, (2) a comprehensive resource list, (3) an inventory of available infrastructure, and (4) a speaker or presenter. The District met these requirements in the reference year.

Website

The District maintains a website address https://www.huroncountyswmd.com. Websites updates are completed on an ongoing and as-needed basis. The website includes drop-down menus for recycled materials, drop off locations, and the transfer station.

Target for Next Plan Update: The District's website will add a flyer with photos showing the materials accepted in the source separated and commingled boxes.

The District will advertise the website in email tag lines and on any hard copy communications such as flyers, guides, etc.

Maintaining and updating the District website is the responsibility of the District.

Comprehensive Resource List and Inventory of Available Infrastructure

The District maintains an inventory of available infrastructure on the webpage an in the District plan (also posted on the webpage). Maintaining and updating the residential recycling guides and the guide for businesses is the responsibility of the District.

Speaker/Presenter

The District employed an Administrative Specialist to implement educational and program coordination responsibilities until 2020. The Administrative Specialist acted as an Education Specialist and was available for speaking engagements. An assistant coordinator was hired in 2022 and now fills the role of speaker/presenter. In addition, the District Coordinator is available to speak and present.

B. Outreach and Marketing Plan

The District currently has existing programs which address the five required target audiences. The following discussion is organized by the target audience.

1. Audience: Residents

Name	Start Date	End Date	Goal
Public Awareness	Ongoing	Ongoing	1 and 2

The objective of the District's public awareness program is to increase residents' knowledge of District programs and recycling activities. The District utilizes a variety of methods to reach as many residents as possible. The website, newspaper advertisement, radio ads, press releases, and brochures.

The District's website provides a clearinghouse of information on District activities and programs, MRF, recycling locations, and District contact info. The District also has available a brochure/flyer about recycling, HHW, yard waste composting, scrap tires, and used oil that is usually distributed at events, but those were not attended due to COVID-19.

The District also makes an effort to incorporate the local media in their efforts to raise awareness. Time and budget permitting, the District works with the media to submit press releases. A total of 31 press releases were submitted from 2017-2020 detailing the District's recycling programs and activities.

Target for Next 5 years: Advertising is costly. The District will look to use other low-cost advertising such as boosting on Facebook.

Name	Start Date	End Date	Goal
Environmental Education	Ongoing	Ongoing	1 and 2

The District provides a variety of educational opportunities and programming for students, youth groups, and civic groups.

Presentations for students, youth groups, and civic groups are performed by request. Presentations cover recycling, reuse, and litter prevention topics. Presentations cover a variety of venues covering a broad audience, including:

- Pre-schools
- Norwalk Green Team
- Migrant Day Camp
- Easter Seals Camp Bellevue
- 4-H Camp (two sessions)
- EnviroThon (District 5)
- Clover Bud Camp
- County FFA Chapter meetings (4)
- Willard Chamber of Commerce meeting
- New London Rotary meeting
- United Methodist Women's Group meeting
- Home School presentations

The District partnered with the Huron County Soil and Water Conservation District to provide yard waste composting education classes.

Target for Next 5 years: Track the number of presentations, audience, and number of attendees. Develop a survey to obtain feedback after the presentation.

The District needs to place focus on reaching the schools. By teaching students, the importance of recycling in their younger years, they learn responsibility, to act, and to share their knowledge with others in their community. As a result, recycling becomes a habit. One method is to develop lesson plans that follow state curriculum guidelines. Once developed the District will outreach to the schools to find a contact person that will distribute the description of the lesson to teachers. The District will create a sign-up and conduct the lesson.

Name	**Start Date**	**End Date**	**Goal**
Environmental Events	Ongoing	Ongoing	1 and 2

The District interacts with the community by participating in several events, including:

- Earth Day events (for county, cities, and schools)
- Arbor Day event (2nd grade class)
- Safety Day (New London Schools)
- Parks and Recreation programs

- Science Fair
- EnviroDays (4th grade class)
- Imagine Norwalk
- Fall Fun Fest
- Clean Sweep
- Norwalk Green Fair

The District's participation includes attending, presenting (in some cases), and distributing promotional items.
Target for Next 5 years: Continue through the planning period.

Name	Start Date	End Date	Goal
Advertising Drop-Off Schedule	2018	Ongoing	1 and 2

The District set a plan to work with communities to post information on their websites about the availability of drop-off sites and when the sites are available. Community websites are a hub of information for recycling and disposal. It would be helpful to list drop-off locations as a collection opportunity. Other ways the drop-off program could be advertised at the community level is an advertisement on utility bills.

The District updated its webpage containing information about the drop-off program to make it more user-friendly for residents.

Target for Next 5 years: The District was not able to work with communities to update websites. The District will target 2 communities a year in this next planning period.

Name	Start Date	End Date	Goal
Promoting Reduction of Household Hazardous Waste Generation	2018	Ongoing	1 and 2

The District's long-term goal is to reduce the amount of HHW materials that residents dispose that are still usable. Materials that are truly household hazardous waste (and not household hazardous products that are still usable) include the following materials:

- Used oil
- Used antifreeze
- Spent household and automotive batteries
- Empty propane cylinders
- Empty aerosol containers
- Other non-usable household hazardous products that, through their normal use according to the manufacturer, have become contaminated, depleted or otherwise unusable.

Materials that contain hazardous constituents but if entirely used as intended by their manufacturer do not end up as waste products, include the following materials:

- Paint products, sealers, and coatings
- Certain automotive car care products
- Household cleaners
- Pesticides, herbicides, and insecticides
- Fertilizers
- Pool chemicals

To accomplish this long-term goal, the District will enhance its education and awareness program to include the following:

- Teach students and adults the value of products that contain hazardous constituents, to buy what is needed and use the entire product for its intended purpose.
- Promote the use of alternative non-hazardous products such as latex paint, plant-based cleaners, or other non-hazardous alternatives.
- Promote project planning for the efficient use of paint products (i.e., coverage formulas on District website).
- Add HHW management techniques to adult education presentations.

Target for Next 5 years: The District does not have a metric for measuring the effectiveness of incorporating these education materials. The message is important and will continue through the planning period.

Name	Start Date	End Date	Goal
Improve HHW Management Education	2018	Ongoing	1 and 2

The District updated its website and publications on HHW management to include proper disposal practices and a list of companies to manage HHW materials in addition to used oil and lead-acid batteries, such as household cleaners and pesticides.

Target for Next 5 years: Continue through the planning period.

2. Audience: Schools

See Environmental Education program above.

3. Audience: Industries

Name	Start Date	End Date	Goal
Business and Industry Outreach	2018	Ongoing	2 and 5

The District planned to promote the waste audits and District-led workshops on the website and by meeting with the Huron County Chamber of Commerce to promote the services to their members. Largely because of the CVOID 19 pandemic the District was not able to do either of these strategies.

Target for Next 5 years: The District will update the webpage and meet with the Huron County Chamber of Commerce in this planning period.

Name	Start Date	End Date	Goal
Commercial/Industrial Online Newsletter/Resources	Ongoing	Ongoing	2 and 5

It's been some time since the District developed a newsletter for the commercial/industrial sector. The District will move away from this program during the planning period. Instead, the District will work to add additional commercial and industrial content to its website to better serve any interested businesses. This will help to further the District's website as a one stop shop for all helpful information on recycling

Target for Next 5 years: Continue through the planning period.

4. Audience: Institutions & Commercial Businesses

See Industrial Audience programs above.

5. Audience – Communities & Elected Officials

Name	Start Date	End Date	Goal
Curbside Recycling Promotion	2018	Ongoing	1 and 2

The District will assist communities with their website education promoting curbside recycling programs. Assistance includes reviewing the webpages and offering suggestions for clarity. The District did not connect with communities to offer this assistance.

Target for Next 5 years: In the next planning period, the District plans to target one community a year with direct outreach to help. Community websites need to be the hub of information for recycling – how to participate, materials to recycle, collection

schedule, etc. To optimize webpages, the District suggests the following best practices: mobile-friendly, user navigation, brand consistency, and use of simple plain language. The combination of simple, easy-to-understand language, readily available information, and ways to participate will help drive behavior change beyond simple education. The easier it is to understand, the more participation will be realized. The District will track community outreach and outreach method, type of promotion assistance, if webpages were modified, and before and after webpage visit metrics.

The District would like to see communities utilize mailings and newsletters to educate. The more touchpoints for education the better. The District will offer services to help develop mailing and newsletters for recycling education.

Name	Start Date	End Date	Goal
Curbside Recycling Technical Assistance	2018	Ongoing	1 and 2

The District will provide technical assistance to cities, villages, or townships that express interest in implementing a curbside recycling program. The District can help with:

- Requests for proposals from service providers (haulers) development and/or review.
- Q & A from households.
- Consortium bidding, where multiple interested political subdivisions within Huron County join to aggregate for services.
- Financial analysis of curbside recycling options.

If there are no communities that express interest to the District, the District will target the communities with a higher population first. By targeting the higher population centers, the District can use its time most efficiently. Furthermore, the higher population centers provide the greatest opportunity to recycle. As of this plan update, the highest population centers without curbside recycling are New London Village, Greenwich Village, and Monroeville Village.

Target for Next 5 years: In the next planning period, the District will target one community a year with direct outreach to offer technical assistance.

D. Outreach Priority

One of the lacking outreach methods missing is digital marketing. A digital marketing campaign will build the District's brand awareness, generate conversations around material management, will help the District understand the audiences, and drive traffic to the website. The visual nature of social media platforms will reach a variety of target audiences and communicate messages with better ease. Deploying this type of strategy will bring more awareness and

conversation to diversion opportunities. It is a powerful outreach tool that is cost effective for the District. Measurable goals are the number of followers and recovery tonnages.

Over this planning period the District selected to develop a digital marketing campaign targeting residents using social media platforms. A simple outline plan is presented below.

Target Audience: Residents	Tactic	Deliverable	Metrics
Program: Digital Marketing Campaign Goals: Increase recycling rates by five percent over the next three years **Problem:** Recycling rates have been flat for several years. The District recommends focusing on additional outreach to households via social media platforms.	Develop fresh graphics for marketing materials.	FY 2024 QTR 1	
	Transition messaging from "awareness" to specific information of what to recycle and behavior change messaging.	FY 2024 QTR 1 and QTR 2	
	Set goals (SMART)	FY 2024 QTR 2	Measure baseline recovery and social media followers
	Develop content and media ongoing posting and interaction	FY 2024 QTR 3	Track analytics
	Post diversified media – use videos, use photos, use residents and businesses	FY 2024 QTR 4	Measure all campaign media engagements methods of delivery, and increased recycling rate numbers.
	Try at least one incentive targeted competition	FY 2025	Measure participation, recycling request increase, recycling tonnage over a year

APPENDIX M

WASTE MANAGEMENT CAPACITY ANALYSIS

Appendix M. Waste Management Capacity Analysis

This appendix will provide the SWMD's strategy for ensuring that it has access to solid waste management facilities. While the primary focus of this strategy is ensuring access to adequate disposal capacity, the SWMD will also ensure that it has access to processing capacity for recyclables and, if needed, access to transfer facilities.

A. Access to Publicly Available Landfill Facilities

Table M-1. Remaining Operating Life of Publicly Available Landfills

Facility	Location		Years of Remaining Capacity	Status	Applicable Dates
	County	State			
Crawford County Landfill	Crawford	OH	25	No change	31-Dec-20
Erie County Landfill	Erie	OH	45	No change	31-Dec-20
American Landfill, Inc	Stark	OH	97	No change	31-Dec-20
Wood County Landfill	Wood	OH	114	Pending Expansion	4-May-22
Evergreen Recycling and Disposal	Wood	OH	36	No change	31-Dec-20
Lorain County Landfill LLC	Lorain	OH	16	No change	31-Dec-20
Sunny Farms Landfill LLC	Seneca	OH	7	No change	31-Dec-20
Rumpke of Northern OH Inc Noble Road Landfill	Richland	OH	17	No change	31-Dec-20
Port Clinton Landfill	Ottawa	OH	5	No change	31-Dec-20

Source(s) of Information: Ohio EPA Facility Data Report, 2020.
Note: The years of remaining capacity are based on the most recent annual report for the facility. Thus, if the owner/operator of a facility obtained a permit to expand the facility after the reference year, then the additional permitted capacity is included in the years of remaining life.

Table M-1 presents the municipal solid waste landfills and where waste was disposed from The District in the reference year. The landfills listed are both ones that accepted direct hauled waste and that accepted transferred waste.

The Wood County landfill as of May 4th, 2022, was granted a permit to expand the approved limits of waste placement, adding 111 years to the capacity of the landfill at current disposal rates. In the reference year, the District disposed of one ton of material in this landfill.

Over the reference year, the District sent material to be disposed of to nine landfills, all within the state.

Table M-2 Tons and Percent Waste Sent to Disposal

Facility	Location		Tons	Percentage of Huron 2020 Disposed Waste
	County	State		
Crawford County Landfill	Crawford	OH	130	1%
Erie County Landfill	Erie	OH	8,649	88%
American Landfill, Inc	Stark	OH	7	0%
Wood County Landfill	Wood	OH	1	0%
Evergreen Recycling and Disposal	Wood	OH	8	0%
Lorain County Landfill LLC	Lorain	OH	2	0%
Sunny Farms Landfill LLC	Seneca	OH	8	0%
Rumpke of Northern OH Inc Noble Road Landfill	Richland	OH	344	3%
Port Clinton Landfill	Ottawa	OH	700	7%
		Total	9,849	100%

Source(s) of Information: Ohio EPA Facility Data Report, 2020.

Table M-2 presents the municipal solid waste landfills used by the District in the reference year as well as the tons disposed at each landfill and the percentage of total waste that was disposed. As seen in Table M-2, 88% of the total waste from the District is disposed of at the Erie County Landfill. This landfill has 45 years left of capacity, which is adequate capacity. There are currently no known issues with this landfill that could cause any issues with waste acceptance.

The remaining two landfills with the largest percentage of the District's waste disposal are the Noble Road Landfill and the Port Clinton Landfill, accepting 3% and 7% of the District's waste respectively. Noble Road Landfill had 17 years of capacity remaining while Port Clinton is nearing the end of its current lifespan with 3 years left of capacity. There are no plans to extend Port Clinton's capacity.

The Ohio EPA's Format 4.1 states a district may assume adequate capacity if:

> *The landfills that combined took 75% of the SWMD's waste have adequate capacity to continue talking waste throughout the first eight years of the planning period and there are no known issues with the landfills that could cause one or more to cease accepting waste, due to something like on-going, unresolved violations or notice that Ohio EPA is proposing to deny the operating license for the facility.*

Using the definition above, it appears that the District has adequate disposal capacity with no known reason to suspect potential capacity shortages in both the near and long term.

B. Access to Captive Landfill Facilities

Table M-3 Remaining Operating Life of Privately Available Landfills

Facility	Location	Years of Remaining Capacity
None		

Source(s) of Information: 2020 Ohio Facility Report.

The District did not send any waste to captive landfill facilities in the reference year.

APPENDIX N

EVALUATING GREENHOUSE GAS EMISSIONS

APPENDIX N. Evaluating Greenhouse Gas Emissions

The Waste Reduction Model (WARM)
WARM is a tool that US EPA developed to quantify the effects of waste management decisions on greenhouse gas emissions. The model demonstrates the benefits of alternative management technologies over traditional management methods. The WARM model is updated regularly. A District can use a different but comparable modeling program to calculate greenhouse gas emission reductions provided the model accounts for waste management and recycling activities.

WARM is intended to compare municipal solid waste management scenarios. Therefore, data is used for only the residential/commercial sector.

Each District will run WARM twice and include the results in the solid waste management plan:

- For the first run, enter all quantities recycled in the reference year in the landfill column (for the baseline year) and for the alternative scenario, enter the quantities recycled in the tons recycled column.
- For the second run, enter the quantities of residential/commercial material recycled in the reference year in the tons recycled column (for the baseline scenario), and then enter the quantities projected to be recycled in the sixth year of the planning period in the alternative scenario column.

Include printouts of the results for both runs in the solid waste management plan.

A. GHG Measurement

Gases that trap heat in the atmosphere are called greenhouse gases (GHG). These gasses include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O) and fluorinated gases. Each gas has its own global warming potential (GWP) with carbon dioxide establishing the baseline of one same global warming potential, all other gases are compared in units of carbon dioxide equivalent (CO_2e). Each gas has varying degrees of effects on the climate and is dependent on the quantity in the atmosphere, the time they remain in the atmosphere, and how strong their GWP is on the atmosphere. Disposal and treatment of materials results in greenhouse gas emissions from collection, transportation, disposal, manufacturing, etc.

The most common method to measure the climate impact of waste management is to measure in terms of carbon dioxide equivalents. Because waste reduction and management results in multiple types of greenhouse gases, the conversion to a standard carbon equivalent measurement allows for a total quantification of impacts. It also establishes a standard language to compare these sources of emissions to other sources like transportation and energy reduction efforts. A carbon equivalent is the amount of CO_2 it that would have the same global warming potential as the waste reduction impacts when measured over a specified timescale. The international standard for reporting CO_2

emissions is metric tons. Carbon dioxide quantities will be reported as $MTCO_2e$, metric tons of carbon dioxide equivalent.

Produced by US EPA, the Waste Reduction Model (WARM) was designed to help solid waste planners, municipal leaders, and other stakeholder organizations track and report greenhouse gas emissions reductions. It is a database tool that helps decision makers predict the strategies that most reduce GHG emissions. The WARM model calculates GHG emission across six waste management modalities (source reduction, recycling, composting, anaerobic digestion, combustion, and landfilling). Modeling different combinations of waste management practices allows decision makers to see which approach leads to the least GHG entering the atmosphere.

WARM is a standard tool used for waste management GHG impacts, however the model does have limitations. For example, the WARM GHG-related impacts of composting organics were developed within the framework of the larger WARM development effort and the presentation of results, estimation of emissions and sinks, and description of ancillary benefits are not comprehensive. Also, the material categories within the model are not exhaustive therefore materials like household hazardous wastes (HHW) are excluded from the modeling because they have no relevant WARM proxy.

The reports below show the metric tons of carbon dioxide equivalent ($MTCO_2e$) which describes the global warming potential of all common greenhouse gases as an equivalent to CO_2. Negative values indicate a savings while positive values indicate increasing emissions. In 2019, Huron County generated 52,161 tons of waste from the residential and commercial sectors, of which 8,914 tons (17%) was diverted from landfills. The tons diverted was input in WARM calculations to determine the GHG emission savings from the diverted materials.

Table N-1: Reference Year Waste Diversion

Total GHG Emissions from Baseline – Year 2020	(19,615) $MTCO_2e$
Total GHG Emissions from Alternative – Year 2030	(19,246.19) $MTCO_2e$
Incremental GHG Emissions Savings	(369) $MTCO_2e$

By the District having diversion programs, the diverted tons of residential/commercial material in the reference year resulted in 19,615 $MTCO_2e$ prevented from being emitted into the atmosphere. To better illustrate the amount saved by the District, the diversion programs are equivalent to:

- Removing 4,230 passenger vehicles from the road
- Conserving 2,241,591 gallons of gasoline
- Conserving 830,042 cylinders of propane

With the projected decrease in diversion by 2030, there is an estimated additional reduction of 369 $MTCO_2e$ of greenhouse gasses. This is equivalent to:

- Removing 144 passenger vehicles to the road
- Conserving 75,934 more gallons of gasoline
- Conserving 28,117 more propane tanks

APPENDIX O

FINANCIAL DATA

APPENDIX O. Financial Data

Ohio Revised Code Section 3734.53(B) requires a solid waste management plan to present a budget. This budget accounts for how the District will obtain money to pay for operating the District and how the District will spend that money. For revenue, the solid waste management plan identifies the sources of funding the District will use to implement its approved solid waste management plan. The plan also provides estimates of how much revenue the District expects to receive from each source. For expenses, the solid waste management plan identifies the programs the SWMD intends to fund during the planning period and estimates how much the SWMD will spend on each program. The plan must demonstrate that planned expenses will be made in accordance with ten allowable uses that are prescribed in ORC Section 3734.57(G).

Ultimately, the solid waste management plan must demonstrate that the SWMD will have adequate money to implement the approved solid waste management plan for a period of 15 years, from 2024 to 2038.

A. Funding Mechanisms and Revenue Generated

This section examines the funding mechanisms expected to be used by the District. In addition, anticipated revenues from each source listed below are projected for each year of the planning period.

1. Disposal Fee

In accordance with Ohio Revised Code 3734.57, the District can levy disposal fees on any waste disposed in landfills within the SWMD. Disposal fees are collected on each ton of solid waste that is disposed of at landfills who levy them. There are three tiers of fees, each with varying costs associated: in-district, out-of-district, and out-of-state disposal fees.

Table O-1. Disposal Fee Schedule and Revenue (in accordance with ORC Section 3734.57(B))

Year	Disposal Fee Schedule ($/ton)			Revenue ($)			Total Disposal Fee Revenue ($)
	In-District	Out-of-District	Out-of-State	In-District	Out-of-District	Out-of-State	
2016	NA	NA	NA	NA	NA	NA	NA
2017							
2018							
2019							
2020							
2021							
2022							
2023							
2024							
2025							
2026							

Year	Disposal Fee Schedule ($/ton)			Revenue ($)			Total Disposal Fee Revenue ($)
	In-District	Out-of-District	Out-of-State	In-District	Out-of-District	Out-of-State	
2027							
2028							
2029							
2030							
2031							
2032							
2033							
2034							
2035							
2036							
2037							
2038							

The District does not have any landfills within its boundaries where waste is disposed. The District does not use disposal fees as a funding mechanism.

2. Generation Fee

In accordance with ORC 3734.573, a solid waste management district may levy fees on the generation of solid wastes within the SWMD. Generation fees are collected on each ton of waste that passes through the transfer station located in the SWMD. The District's primary source of revenue are generation fees.

Table O-2. Generation Fee Schedule and Revenue

Year	Generation Fee Schedule ($ per ton)	Total Revenue from Generation Fee ($)
2016	$4.50	$212,916
2017	$4.50	$171,645
2018	$4.50	$217,701
2019	$4.50	$195,000
2020	$4.50	$195,897
2021	$4.50	$201,314
2022	$4.50	$203,965
2023	$4.50	$207,840
2024	$4.50	$211,716
2025	$4.50	$215,593
2026	$4.50	$219,471
2027	$4.50	$223,350
2028	$4.50	$227,229
2029	$4.50	$231,110

Year	Generation Fee Schedule ($ per ton)	Total Revenue from Generation Fee ($)
2030	$4.50	$234,992
2031	$5.50	$287,212
2032	$5.50	$287,212
2033	$5.50	$287,212
2034	$5.50	$287,212
2035	$5.50	$287,212
2036	$5.50	$287,212
2037	$5.50	$287,212
2038	$5.50	$287,212

Source(s) of Information: Huron County SWMD Quarterly Fee Reports and Appendix D
Sample Calculations:
Total Revenue from Generation = (Generation fee * Waste Disposed) * 90%
2022 Total Revenue from Generation = (($4.50 * 50,362 tons) * .90) = $203,965

The District levies a generation fee of $4.50 per ton. With this cost, the District generated an average of almost $199,000 annually from 2016 to 2020. Because generation revenue is directly tied to the waste disposed, the projections from 2022 on were calculated using projected waste disposal totals made in Appendix D. Revenues are conservatively estimated in Table O-2 using 90% of the projected waste disposed.

A generation fee is projected to increase to $5.50 per ton in 2031. The projected increase in the generation fee will not be approved as a part of this 2024 Plan Update and the associated ratification process. If the fee increases are needed during the time projected in this 2024 Plan Update or anytime in the future, the District will either conduct a separate ratification process or include it in a future Plan Update process.

3. Designation Fee

In accordance with Ohio Revised Code 343.014, a solid waste management district may adopt designation fees to assure adequate financing to implement the approved solid waste plan. The District does not currently utilize any designation fees.

Table O-3. Designation Fee Schedule and Revenue

Year	Designation Fee Schedule ($ per ton)	Total Designation Fee Revenue ($)
2016	NA	NA
2017		
2018		
2019		
2020		

Year	Designation Fee Schedule ($ per ton)	Total Designation Fee Revenue ($)
2021		
2022		
2023		
2024		
2025		
2026		
2027		
2028		
2029		
2030		
2031		
2032		
2033		
2034		
2035		
2036		
2037		
2038		

4. Loans

The District does not have any outstanding debt due to existing loans.

Table O-4. Loans

Year Debt Was/Will be Obtained	Outstanding Balance	Lending Institution	Repayment Term (years)	Annual Debt Service ($)
n/a	n/a	n/a	n/a	n/a

5. Other Sources of District Revenue

Several other revenue streams include: Recycling Revenue, Grants, Legal Payments, User Fees and Other.

Recycling Revenue: The District receives approximately $12,567 annually in township fees for recycling services. This revenue is projected to remain flat throughout the planning period.

Grants: Funding from grants are competitive and not guaranteed. One grant was awarded to the District in 2018. In 2018, the District received $7,000 grant from the Ohio EPA. The District also received a grant of $50,000 in 2021. Revenue from this source is not stable year over year and therefore the District does not project receiving any revenue from this source over the planning period.

Legal Payment: The District received a legal settlement of $30,000 in 2018. Revenue from this source is not stable year over year and there are no projections to receive any revenue from this source over the planning period.

User Fees: Two user fees were received by the District from 2016-2020. Both user fees occurred in 2020. One in the third quarter for $2,400 and one in the fourth quarter for $1,800 for a total of $4,200.

Other: Includes waiver fees and other miscellaneous monies.

Waiver fees are collected on each ton of solid waste that is delivered to an undesignated disposal facility. Any person, legislative authority of a municipal corporation, or township may apply for a waiver from the designation requirements established in this *Plan Update.* Waiver agreements between the Board and the person who applied for the waiver will contain the terms and conditions upon which the waiver was granted and the payment by the grantee of the waiver fee, if any, assessed on each ton of solid waste covered by the waiver.

Waiver fee revenue is projected to generate a flat $678 in revenue annually based on historical amounts. The actual waiver fee revenue and waiver fee per ton will be decided by the Board as needed throughout the planning period.

Table O-5. Other Revenues and Other Revenue Source

Year	Recycling Revenue	Grants	Legal Payment	User Fee	Other	Total Other Revenue
2016	$14,890.00	$-	$-	$-	$-	$14,890.00
2017	$11,634.13	$-	$-	$-	$1,714.08	$13,348.21
2018	$18,866.42	$7,000.00	$30,000.00	$-	$547.20	$56,413.62
2019	$10,237.95	$-	$-	$-	$797.80	$11,035.75
2020	$7,206.33	$-	$-	$4,200.00	$2,713.81	$14,120.14
2021	$12,468.02	$50,000.00	$-	$-	$14,355.22	$76,823.24
2022	$12,500.00	$-	$-	$-	$678.00	$13,178.00
2023	$12,500.00	$-	$-	$-	$678.00	$13,178.00
2024	$12,500.00	$-	$-	$-	$678.00	$13,178.00
2025	$12,500.00	$-	$-	$-	$678.00	$13,178.00
2026	$12,500.00	$-	$-	$-	$678.00	$13,178.00
2027	$12,500.00	$-	$-	$-	$678.00	$13,178.00
2028	$12,500.00	$-	$-	$-	$678.00	$13,178.00
2029	$12,500.00	$-	$-	$-	$678.00	$13,178.00
2030	$12,500.00	$-	$-	$-	$678.00	$13,178.00
2031	$12,500.00	$-	$-	$-	$678.00	$13,178.00
2032	$12,500.00	$-	$-	$-	$678.00	$13,178.00
2033	$12,500.00	$-	$-	$-	$678.00	$13,178.00

Year	Recycling Revenue	Grants	Legal Payment	User Fee	Other	Total Other Revenue
2034	$12,500.00	$-	$-	$-	$678.00	$13,178.00
2035	$12,500.00	$-	$-	$-	$678.00	$13,178.00
2036	$12,500.00	$-	$-	$-	$678.00	$13,178.00
2037	$12,500.00	$-	$-	$-	$678.00	$13,178.00
2038	$12,500.00	$-	$-	$-	$678.00	$13,178.00

Source(s) of Information: Huron County SWMD Quarterly Fee Reports 2016-2021
Sample Calculations:
Other Revenue Total (2015) = rates and charges + county contributions + donations + grants + reimbursements + other

Table O-5 above presents the District's projected other sources of revenue through the planning period. The categories of grants, legal payment, and user fee are all held at $0 for the projections because these categories do not consistently bring in revenue. See below for the remaining projection descriptions.

Recycling Revenue Projections:

Average revenue received over the 2016 to 2021 time is $12,567. This revenue is for cost of service and is expected through the planning period. These projections hold the $12,500 constant.

Other Projections:

These projections use the four-year average annual change in dollars ($678) from 2016-2020 and hold this value constant throughout the planning period. The District did not include the year 2021 value of $14,355 as this is an outlier year. The 2021 value is high due to additional income of $3,000 and a legal settlement of $10,000.

6. Summary of District Revenues

Table O-6 Summary of District Revenues (in accordance with ORC 3734.57, ORC 3734.572 and ORC 3734.573)

Year	Disposal Fees	Generation Fees	Designation Fees	Other Revenue	Total Revenue
2016	$-	$212,915.68	$-	$14,890.00	$227,805.68
2017	$-	$171,645.08	$-	$13,348.21	$184,993.29
2018	$-	$217,701.07	$-	$56,413.62	$274,114.69
2019	$-	$195,000.28	$-	$11,035.75	$206,036.03
2020	$-	$195,897.32	$-	$14,120.14	$210,017.46
2021	$-	$201,314.15	$-	$76,823.24	$278,137.39
2022	$-	$203,965.20	$-	$13,178.00	$217,143.20
2023	$-	$207,840.08	$-	$13,178.00	$221,018.08
2024	$-	$211,715.96	$-	$13,178.00	$224,893.96
2025	$-	$215,592.83	$-	$13,178.00	$228,770.83
2026	$-	$219,470.69	$-	$13,178.00	$232,648.69
2027	$-	$223,349.53	$-	$13,178.00	$236,527.53
2028	$-	$227,229.35	$-	$13,178.00	$240,407.35

Year	Disposal Fees	Generation Fees	Designation Fees	Other Revenue	Total Revenue
2029	$-	$231,110.14	$-	$13,178.00	$244,288.14
2030	$-	$234,991.89	$-	$13,178.00	$248,169.89
2031	$-	$287,212.31	$-	$13,178.00	$300,390.31
2032	$-	$287,212.31	$-	$13,178.00	$300,390.31
2033	$-	$287,212.31	$-	$13,178.00	$300,390.31
2034	$-	$287,212.31	$-	$13,178.00	$300,390.31
2035	$-	$287,212.31	$-	$13,178.00	$300,390.31
2036	$-	$287,212.31	$-	$13,178.00	$300,390.31
2037	$-	$287,212.31	$-	$13,178.00	$300,390.31
2038	$-	$287,212.31	$-	$13,178.00	$300,390.31

Source(s) of Information: Huron County SWMD Quarterly Fee Reports 2016 – 2021. All other amounts are projections (refer to Table O-2 and O-5).

Table O-6 above includes all funding mechanisms that are used, and the amount of revenue generated by each method for each year for the planning period. The District held projections constant after the seventh year of the planning period.

B. Cost of Implementing Plan

Table O-7 Years 2016 – 2032

Line #	Category/Program	2016	2017	2018	2019	2020	2021	2022	2023
1	**1. Plan Monitoring/Prep.**	$13,081.16	$-	$-	$-	$-	$-	$-30,000.00	$4,000.00
1.a	a. Plan Preparation	$13,081.16	$-	$-	$-	$-	$-	$-	$-
1.b	b. Plan Monitoring	$-	$-	$-	$-	$-	$-	$-	$-4,000.00
1.c	c. Other	$-	$-	$-	$-	$-	$-	$-	$-
2	**2. Plan Implementation**	$219,118.95	$179,950.48	$225,213.77	$222,606.00	$323,776.09	$228,290.63	$209,940.82	$220,239.05
2.a	a. District Administration	$111,838.76	$96,748.49	$128,802.49	$96,992.12	$127,495.78	$158,731.44	$123,704.56	$127,415.70
2.a.1	Personnel	$83,867.12	$81,108.41	$89,835.56	$87,915.82	$83,441.09	$67,927.85	$84,819.79	$87,364.38
2.a.2	Office Overhead	$26,546.64	$13,233.33	$6,610.13	$8,517.88	$10,886.58	$4,586.72	$12,082.12	$12,444.58
2.a.3	Other	$1,425.00	$2,406.75	$32,356.80	$558.42	$33,168.11	$86,216.87	$26,802.65	$27,606.73
2.b	b. Facility Operation	$-	$-	$-	$-	$-	$-	$-	$-
2.b.1	MRF/Recycling Center	$-	$-	$-	$-	$-	$-	$-	$-
2.b.2	Compost	$-	$-	$-	$-	$-	$-	$-	$-
2.b.3	Transfer	$-	$-	$-	$-	$-	$-	$-	$-
2.b.4	Special Waste	$-	$-	$-	$-	$-	$-	$-	$-
2.c	c. Landfill Closure/Post-Closure	$-	$-	$-	$-	$-	$-	$-	$-
2.d	d. Recycling Collection	$107,280.19	$83,201.99	$84,529.78	$87,776.02	$80,000.00	$69,559.19	$86,236.26	$88,823.35
2.d.1	Curbside	$10,000.00	$-	$-	$-	$-	$-	$-	$-
2.d.2	Drop-off	$97,280.19	$83,201.99	$84,529.78	$87,776.02	$80,000.00	$69,559.19	$86,236.26	$88,823
2.d.3	Combined Curbside/Drop-off	$-	$-	$-	$-	$-	$-	$-	$-
2.d.4	Multi-family	$-	$-	$-	$-	$-	$-	$-	$-
2.d.5	Business/Institutional	$-	$-	$-	$-	$-	$-	$-	$-
2.d.6	Other	$-	$-	$-	$-	$-	$-	$-	$-
2.e	e. Special Collections	$-	$-	$-	$-	$-	$-	$-	$-
2.e.1	Tire Collection	$-	$-	$-	$-	$-	$-	$-	$-
2.e.2	HHW Collection	$-	$-	$-	$-	$-	$-	$-	$-
2.e.3	Electronics Collection	$-	$-	$-	$-	$-	$-	$-	$-
2.e.4	Appliance Collection	$-	$-	$-	$-	$-	$-	$-	$-
2.e.5	Other Collection Drives	$-	$-	$-	$-	$-	$-	$-	$-
2.f	f. Yard Waste/Other Organics	$-	$-	$-	$-	$-	$-	$-	$-
2.g	g. Education/Awareness	$-	$-	$-	$4,903.86	$-	$-	$-	$-
2.g.1	Education Staff	$-	$-	$-	$-	$-	$-	$-	$-
2.g.2	Advertisement/Promotion	$-	$-	$-	$4,903.86	$-	$-	$-	$-4,000
2.g.3	Other	$-	$-	$-	$-	$-	$-	$-	$-
2.h	h. Recycling Market Development	$-	$-	$-	$-	$-	$-	$-	$-
2.h.1	General Market Development Activities	$-	$-	$-	$-	$-	$-	$-	$-
2.h.2	ODNR pass-through grant	$-	$-	$-	$-	$-	$-	$-	$-
2.i	i. Service Contracts	$-	$-	$-	$-	$-	$-	$-	$-
2.j	j. Feasibility Studies	$-	$-	$-	$-	$-	$-	$-	$-
2.k	k. Waste Assessments/Audits	$-	$-	$-	$-	$-	$-	$-	$-
2.l	l. Dump Cleanup	$-	$-	$-	$-	$-	$-	$-	$-
2.m	m. Litter Collection/Education	$-	$-	$-	$-	$-	$-	$-	$-
2.n	n. Emergency Debris Management	$-	$-	$-	$-	$-	$-	$-	$-
2.o	o. Loan Payment	$-	$-	$-	$-	$-	$-	$-	$-
2.p	p. Other	$-	$-	$11,881.50	$32,934.00	$116,280.31	$-	$-	$-
3	**3. Health Dept. Enforcement**	$0	$0	$0	$0	$0	$0	$0	$0
4	**4. County Assistance**	$0	$0	$0	$0	$0	$0	$0	$0
4.a	a. Maintaining Roads								
4.b	b. Maintaining Public Facilities								
4.c	c. Providing Emergency Services								
4.d	d. Providing Other Public Services								
5	**5. Well Testing**	$0	$0	$0	$0	$0	$0	$0	$0
6	**6. Out-of-State Waste Inspection**								
7	**7. Open Dump, Litter Law Enforcement**	$0	$0	$0	$0	$0	$0	$0	$0
7.a	a. Heath Departments								
7.b	b. Local Law Enforcement								
7.c	c. Other								
8	**8. Heath Department Training**								
9	**9. Municipal/Township Assistance**	$0	$0	$0	$0	$0	$0	$0	$0
9.a	a. Maintaining Roads								
9.b	b. Maintaining Public Facilities								
9.c	c. Providing Emergency Services								
9.d	d. Providing other Public Services								
10	**10. Compensation to Affected Community (ORC Section 3734.35)**	$0	$0	$0	$0	$0	$0	$0	$0
	Total Expenses	$232,200	$179,950	$225,214	$222,606	$321,349	$228,066	$209,941	$224,239

Table O-7 Years 2024 – 2031

Line #	Category/Program	2024	2025	2026	2027	2028	2029	2030	2031
1	**1. Plan Monitoring/Prep.**	$4,000	$4,000	$4,000	$30,000	$4,000	$4,000	$4,000	$4,000
1.a	a. Plan Preparation				$15,000-	$15,000			
1.b	b. Plan Monitoring	$4,000-	$4,000-	$4,000-	$-	$4,000-	$4,000-	$4,000-	$4,000-
1.c	c. Other	$-	$-	$-	$-	$-	$-	$-	$-
2	**2. Plan Implementation**	$226,726.22	$233,408.01	$240,290.25	$247,378.95	$254,680.32	$262,200.73	$266,764.96	$266,764.96
2.a	a. District Administration	$131,238.17	$135,175.31	$139,230.57	$143,407.49	$147,709.71	$152,141.00	$156,705.23	$156,705.23
2.a.1	Personnel	$89,985.31	$92,684.87	$95,465.42	$98,329.38	$101,279.26	$104,317.64	$107,447.17	$107,447.17
2.a.2	Office Overhead	$12,817.92	$13,202.46	$13,598.53	$14,006.49	$14,426.68	$14,859.48	$15,305.27	$15,305.27
2.a.3	Other	$28,434.93	$29,287.98	$30,166.62	$31,071.62	$32,003.77	$32,963.88	$33,952.80	$33,952.80
2.b	b. Facility Operation	$-	$-	$-	$-	$-	$-	$-	$-
2.b.1	MRF/Recycling Center	$-	$-	$-	$-	$-	$-	$-	$-
2.b.2	Compost	$-	$-	$-	$-	$-	$-	$-	$-
2.b.3	Transfer	$-	$-	$-	$-	$-	$-	$-	$-
2.b.4	Special Waste	$-	$-	$-	$-	$-	$-	$-	$-
2.c	c. Landfill Closure/Post-Closure	$-	$-	$-	$-	$-	$-	$-	$-
2.d	d. Recycling Collection	$91,488.05	$94,232.69	$97,059.68	$99,971.47	$102,970.61	$106,059.73	$106,059.73	$106,059.73
2.d.1	Curbside	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
2.d.2	Drop-off	$91,488.05	$94,232.69	$97,059.68	$99,971.47	$102,970.61	$106,059.73	$106,059.73	$106,059.73
2.d.3	Combined Curbside/Drop-off	$-	$-	$-	$-	$-	$-	$-	$-
2.d.4	Multi-family	$-	$-	$-	$-	$-	$-	$-	$-
2.d.5	Business/Institutional	$-	$-	$-	$-	$-	$-	$-	$-
2.d.6	Other	$-	$-	$-	$-	$-	$-	$-	$-
2.e	e. Special Collections	$-	$-	$-	$-	$-	$-	$-	$-
2.e.1	Tire Collection	$-	$-	$-	$-	$-	$-	$-	$-
2.e.2	HHW Collection	$-	$-	$-	$-	$-	$-	$-	$-
2.e.3	Electronics Collection	$-	$-	$-	$-	$-	$-	$-	$-
2.e.4	Appliance Collection	$-	$-	$-	$-	$-	$-	$-	$-
2.e.5	Other Collection Drives	$-	$-	$-	$-	$-	$-	$-	$-
2.f	f. Yard Waste/Other Organics	$-	$-	$-	$-	$-	$-	$-	$-
2.g	g. Education/Awareness	$ 4,000.00	$ 4,000.00	$ 4,000.00	$ 4,000.00	$ 4,000.00	$ 4,000.00	$ 4,000.00	$ 4,000.00
2.g.1	Education Staff	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2.g.2	Advertisement/Promotion	$ 4,000.00	$ 4,000.00	$ 4,000.00	$ 4,000.00	$ 4,000.00	$ 4,000.00	$ 4,000.00	$ 4,000.00
2.g.3	Other	$-	$-	$-	$-	$-	$-	$-	$-
2.h	h. Recycling Market Development	$-	$-	$-	$-	$-	$-	$-	$-
2.h.1	General Market Development Activities	$-	$-	$-	$-	$-	$-	$-	$-
2.h.2	ODNR pass-through grant	$-	$-	$-	$-	$-	$-	$-	$-
2.i	i. Service Contracts	$-	$-	$-	$-	$-	$-	$-	$-
2.j	j. Feasibility Studies	$-	$-	$-	$-	$-	$-	$-	$-
2.k	k. Waste Assessments/Audits	$-	$-	$-	$-	$-	$-	$-	$-
2.l	l. Dump Cleanup	$-	$-	$-	$-	$-	$-	$-	$-
2.m	m. Litter Collection/Education	$-	$-	$-	$-	$-	$-	$-	$-
2.n	n. Emergency Debris Management	$-	$-	$-	$-	$-	$-	$-	$-
2.o	o. Loan Payment	$-	$-	$-	$-	$-	$-	$-	$-
2.p	p. Other	$-	$-	$-	$-	$-	$-	$-	$-
3	**3. Health Dept. Enforcement**	$0	$0	$0	$0	$0	$0	$0	$0
4	**4. County Assistance**	$0	$0	$0	$0	$0	$0	$0	$0
4.a	a. Maintaining Roads								
4.b	b. Maintaining Public Facilities								
4.c	c. Providing Emergency Services								
4.d	d. Providing Other Public Services								
5	**5. Well Testing**	$0	$0	$0	$0	$0	$0	$0	$0
6	**6. Out-of-State Waste Inspection**								
7	**7. Open Dump, Litter Law Enforcement**	$0	$0	$0	$0	$0	$0	$0	$0
7.a	a. Heath Departments								
7.b	b. Local Law Enforcement								
7.c	c. Other								
8	**8. Heath Department Training**								
9	**9. Municipal/Township Assistance**	$0	$0	$0	$0	$0	$0	$0	$0
9.a	a. Maintaining Roads								
9.b	b. Maintaining Public Facilities								
9.c	c. Providing Emergency Services								
9.d	d. Providing other Public Services								
10	**10. Compensation to Affected Community (ORC Section 3734.35)**	$0	$0	$0	$0	$0	$0	$0	$0
	Total Expenses	$230,726	$237,408	$244,290	$262,379	$273,680	$266,201	$270,765	$270,765

Table O-7 Years 2032 – 2038

Line #	Category/Program	2032	2033	2024	2035	2036	2037	2038
1	**1. Plan Monitoring/Prep.**	$15,000.00	$19,000.00	$4,000.00	$4,000.00	$4,000.00	$15,000.00	$19,000.00
1.a	a. Plan Preparation	$15,000.00	$15,000.00				$15,000.00	$15,000.00
1.b	b. Plan Monitoring	$ -	$ 4,000.00	$ 4,000.00	$ 4,000.00	$ 4,000.00	$ -	$ 4,000.00
1.c	c. Other	$-	$-	$-	$-	$-	$-	$-
2	**2. Plan Implementation**	$ 266,764.96	$ 266,764.96	$ 266,764.96	$ 266,764.96	$ 266,764.96	$ 266,764.96	$ 266,764.96
2.a	a. District Administration	$ 156,705.23	$ 156,705.23	$ 156,705.23	$ 156,705.23	$ 156,705.23	$ 156,705.23	$ 156,705.23
2.a.1	Personnel	$ 107,447.17	$ 107,447.17	$ 107,447.17	$ 107,447.17	$ 107,447.17	$ 107,447.17	$ 107,447.17
2.a.2	Office Overhead	$ 15,305.27	$ 15,305.27	$ 15,305.27	$ 15,305.27	$ 15,305.27	$ 15,305.27	$ 15,305.27
2.a.3	Other	$ 33,952.80	$ 33,952.80	$ 33,952.80	$ 33,952.80	$ 33,952.80	$ 33,952.80	$ 33,952.80
2.b	b. Facility Operation	$-	$-	$-	$-	$-	$-	$-
2.b.1	MRF/Recycling Center	$-	$-	$-	$-	$-	$-	$-
2.b.2	Compost	$-	$-	$-	$-	$-	$-	$-
2.b.3	Transfer	$-	$-	$-	$-	$-	$-	$-
2.b.4	Special Waste	$-	$-	$-	$-	$-	$-	$-
2.c	c. Landfill Closure/Post-Closure	$-	$-	$-	$-	$-	$-	$-
2.d	d. Recycling Collection	$106,059.73	$106,059.73	$106,059.73	$106,059.73	$106,059.73	$106,059.73	$106,059.73
2.d.1	Curbside	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
2.d.2	Drop-off	$106,059.73	$106,059.73	$106,059.73	$106,059.73	$106,059.73	$106,059.73	$106,059.73
2.d.3	Combined Curbside/Drop-off	$-	$-	$-	$-	$-	$-	$-
2.d.4	Multi-family	$-	$-	$-	$-	$-	$-	$-
2.d.5	Business/Institutional	$-	$-	$-	$-	$-	$-	$-
2.d.6	Other	$-	$-	$-	$-	$-	$-	$-
2.e	e. Special Collections	$-	$-	$-	$-	$-	$-	$-
2.e.1	Tire Collection	$-	$-	$-	$-	$-	$-	$-
2.e.2	HHW Collection	$-	$-	$-	$-	$-	$-	$-
2.e.3	Electronics Collection	$-	$-	$-	$-	$-	$-	$-
2.e.4	Appliance Collection	$-	$-	$-	$-	$-	$-	$-
2.e.5	Other Collection Drives	$-	$-	$-	$-	$-	$-	$-
2.f	f. Yard Waste/Other Organics	$-	$-	$-	$-	$-	$-	$-
2.g	g. Education/Awareness	$ 4,000.00	$ 4,000.00	$ 4,000.00	$ 4,000.00	$ 4,000.00	$ 4,000.00	$ 4,000.00
2.g.1	Education Staff	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2.g.2	Advertisement/Promotion	$ 4,000.00	$ 4,000.00	$ 4,000.00	$ 4,000.00	$ 4,000.00	$ 4,000.00	$ 4,000.00
2.g.3	Other	$-	$-	$-	$-	$-	$-	$-
2.h	h. Recycling Market Development	$-	$-	$-	$-	$-	$-	$-
2.h.1	General Market Development Activities	$-	$-	$-	$-	$-	$-	$-
2.h.2	ODNR pass-through grant	$-	$-	$-	$-	$-	$-	$-
2.i	i. Service Contracts	$-	$-	$-	$-	$-	$-	$-
2.j	j. Feasibility Studies	$-	$-	$-	$-	$-	$-	$-
2.k	k. Waste Assessments/Audits	$-	$-	$-	$-	$-	$-	$-
2.l	l. Dump Cleanup	$-	$-	$-	$-	$-	$-	$-
2.m	m. Litter Collection/Education	$-	$-	$-	$-	$-	$-	$-
2.n	n. Emergency Debris Management	$-	$-	$-	$-	$-	$-	$-
2.o	o. Loan Payment	$-	$-	$-	$-	$-	$-	$-
2.p	p. Other	$-	$-	$-	$-	$-	$-	$-
3	**3. Health Dept. Enforcement**	$0	$0	$0	$0	$0	$0	$0
4	**4. County Assistance**	$0	$0	$0	$0	$0	$0	$0
4.a	a. Maintaining Roads							
4.b	b. Maintaining Public Facilities							
4.c	c. Providing Emergency Services							
4.d	d. Providing Other Public Services							
5	**5. Well Testing**	$0	$0	$0	$0	$0	$0	$0
6	**6. Out-of-State Waste Inspection**							
7	**7. Open Dump, Litter Law Enforcement**	$0	$0	$0	$0	$0	$0	$0
7.a	a. Heath Departments							
7.b	b. Local Law Enforcement							
7.c	c. Other							
8	**8. Heath Department Training**							
9	**9. Municipal/Township Assistance**	$0	$0	$0	$0	$0	$0	$0
9.a	a. Maintaining Roads							
9.b	b. Maintaining Public Facilities							
9.c	c. Providing Emergency Services							
9.d	d. Providing other Public Services							
10	**10. Compensation to Affected Community (ORC Section 3734.35)**	$0	$0	$0	$0	$0	$0	$0
	Total Expenses	$281,765	$285,765	$270,765	$270,765	$270,765	$281,765	$285,765

Sample Calculation 2022:

2022 value = (5-year historical average *0.03) + 5-year historical average
2022 value Personnel = ($82,391 *0.03) + $82,391 = **$84,819**

Sample Calculation 2023 – 2038:

2023 value = (2022 value * 0.03) + 2022 value
2023 value Personnel = ($84,819 * 0.03) + $84,819 = **$87,364.38**

The expense line items in Table O-7 are the same as those the SWMD uses to report expenses in the quarterly fee reports. Historical 2016 and 2017 expenses shown in Table O-7 do not match the quarterly fee reports. Ohio EPA and the District made an adjustment to reconcile report differences. As the District prepared this 2024 Plan Update it became apparent in some cases, additional years of expenses did not align with quarterly fee reports and the auditor reports. This record keeping error was reconciled by leaving 2016 and 2017 expense line items unchanged in this Plan Update. An adjustment was made to the ending fund balance for 2017 to match the Huron County auditor report. Reconciling the end balance of 2017 corrected the data record keeping error. Expenses in 2018, 2019, 2020, and 2021 are accurate detailing District expenses and match the Huron County auditor report.

Each expense applicable to the District allocated to line items in Table O-7 are explained here:

1. Plan Monitoring/Prep.

1.a Plan Preparation

2016 – 2021 –Actual consultant expenses for developing Solid Waste Management Plan.

2022 – 2038 – The SWMD is budgeting costs for a consultant for developing the 2024 and future Plan Update's. The expenses shown are projected consulting fees for plan preparation.

1.b Plan Monitoring

2022 – 2038 – Expected costs outside of SWMD personnel costs to conduct surveys, assist with quarterly fee reports and other needed monitoring reports.

2. Plan Implementation

2.a District Administration

2.a.1 Personnel

2016 – 2021 - Personnel costs for staff. Expense line items include cost for payroll, payroll taxes, and benefits for SWMD staff (including PERS, Medicare, and insurance). The costs shown for 2016 through 2021 are actual expenses.

2022 – 2038 - In 2022, the U.S. national inflation rate trended around 8.5%. The SWMD is budgeting for a 3% annual rate increase on salaries and annually on fringes and benefits.

2.a.2 Office Overhead –

2016 – 2021 - This includes travel/conference expenses, supplies, training, postage/shipping, vehicles, and office services (phone). The SWMD is also recording fuel expenses to this line item. The costs shown for 2016 through 2021 are actual expenses.

2022 – 2038 - The District found the average from the five-year (2016 – 2021) historical numbers and multiplied this by an assumed annual inflation rate of 3%. Using the average allows for the fund to budget for one vehicle replacement every 5 years.

2.a.3 Other

2016 – 2021 – This includes expenditures for SWMD administration that are not represented by the other line items in this subcategory such as professional services (legal and consulting, etc.). The costs shown for 2016 through 2021 are actual expenses.

2022 – 2038 - The District found the average from the five-year (2016 – 2021) historical numbers and multiplied this by an assumed annual inflation rate of 3%.

2.b. Facility Operation

2.b.1 MRF/Recycling Center – n/a

2.b.2 Compost – n/a

2.b.3 Transfer – Transfer Station operational expenses are not funded with HB592 funding mechanisms.

2.b.4 Special Waste – n/a

2.c. Landfill Closure/Post-Closure – Landfill post closure care costs are not funded with HB592 funding mechanisms.

2.d. Recycling Collection

2.d.1 Curbside – No expenses incurred or budgeted.

2.d.2 Drop-off - The drop-off program is not a direct cost to the District because the program is paid for by the political jurisdiction of the community. The transfer station budget covers collection costs.

2016 – 2021 – Actual program contract costs to service the recycling drop-off containers.

2022 – 2038 – Costs are projected to increase 3% annually from 2023 through the planning period.

2.d.3 Combined Curbside/Drop-off – n/a

2.d.4 Multi-Family – n/a

2.d.5 Business/Institutional – n/a

2.d.6 Other – n/a

2.e. Special Collections – Expenses related to special collections are absorbed by the transfer station at no cost to the District. The transfer station receives the revenue from these materials as well.

2.e.1. Tire Collection

2022 – 2038 – The District's ability to operate this program is dependent upon funding from Ohio EPA grants. Grant funding is competitive and not guaranteed; therefore, it is not projected in Table O-7. If the District does receive an Ohio EPA grant, unencumbered funds will be used toward the grant match.

2.e.2. HHW Collection – No expenses incurred or budgeted.

2.e.3. Electronics Collection – No expenses incurred or budgeted.

2.e.4. Appliance Collection – No expenses incurred or budgeted.

2.e.5. Other Collection Drives – n/a

2.f.1. Yard Waste/Other Organics - No expenses incurred or budgeted.

2.g. Education/Awareness

2.g.1 Education Staff - No expenses incurred or budgeted for this line item. Staff costs to implement programs and strategies for education and outreach are absorbed in the personnel line item. The District anticipates indirect costs in implementing the outreach priority.

2.g.2. Advertisement/Promotion - Advertising and promotional costs for programs and strategies are budgeted annually. Costs are budgeted constant through the planning period.

2.g.3. Other – No expenses incurred or budgeted.

2.h.1 General Market Development Activities - No expenses incurred or budgeted.

2.h.2 ODNR pass-through grant - No expenses incurred or budgeted.

2.i Service Contracts - No expenses incurred or budgeted.

2.j Feasibility Studies - No expenses incurred or budgeted.

2.k Waste Assessments/Audits - No expenses incurred or budgeted.

2.l Dump Cleanup - No expenses incurred or budgeted.

2.m. Litter Collection/Education - No expenses incurred or budgeted. Boy Scouts and 4-H supplied bags and safety vests to the District. Vests are only used a few times a year and are in good condition. The District has not needed to purchase new ones. Waste is dumped free of cost and is absorbed by the transfer station.

2.n. Emergency Debris Management - No expenses incurred or budgeted.

2.o. Loan Payment - No expenses incurred or budgeted.

2.p. Other –

2016 – 2021 – Expenses incurred that are classified as “other”. The District incurred legal fees from a lawsuit with Erie County. In 2020, there was a large expense of $116,280 from this legal dispute with Erie County. The expense included fees, court costs, lawyer payments, etc. incurred as a result of the dispute.

3. Health Dept. Enforcement - No expenses incurred or budgeted.

4. County Assistance - No expenses incurred or budgeted

5. Well Testing - No expenses incurred or budgeted

6. Out-of-State Waste Inspection - No expenses incurred or budgeted

7. Open Dump, Litter Law Enforcement - No expenses incurred or budgeted

8. Health Department Training - No expenses incurred or budgeted

9. Municipal/Township Assistance - No expenses incurred or budgeted

These projections do not hold the District to a binding commitment to spend a certain amount of money on a particular strategy, program, or facility. The District’s Coordinator may review and revise the budget as needed, with the support of the Policy Committee, to implement planned strategies, facilities, and programs as needed and as possible with available funds.

The SWMD reserves the right to revise the budget and reallocate funds as programs change or as otherwise deemed necessary to be in the best interest of the District. The Policy Committee will then approve any budget adjustments.

Table O-8 Budget Summary

Year ($)	Revenue Balance	Expenses	Annual Surplus/Deficit	Balance
($)				
2015				
2016				

Year ($)	Revenue Balance	Expenses	Annual Surplus/Deficit	Balance
2017	Ending Balance Reconciled			$168,036
2018	$274,115	$225,214	$48,901	$216,937
2019	$206,036	$222,606	-$16,570	$200,367
2020	$210,017	$321,349	-$111,332	$89,035
2021	$278,137	$228,066	$50,071	$139,106
2022	$217,143	$209,941	$7,202	$146,309
2023	$221,018	$224,239	-$3,221	$143,088
2024	$224,894	$230,726	-$5,832	$137,256
2025	$228,771	$237,408	-$8,637	$128,618
2026	$232,649	$244,290	-$11,642	$116,977
2027	$236,528	$262,379	-$25,851	$91,125
2028	$240,407	$273,680	-$33,273	$57,852
2029	$244,288	$266,201	-$21,913	$35,940
2030	$248,170	$270,765	-$22,595	$13,345
2031	$300,390	$270,765	$29,625	$42,970
2032	$300,390	$281,765	$18,625	$61,595
2033	$300,390	$285,765	$14,625	$76,221
2034	$300,390	$270,765	$29,625	$105,846
2035	$300,390	$270,765	$29,625	$135,472
2036	$300,390	$270,765	$29,625	$165,097
2037	$300,390	$281,765	$18,625	$183,722
2038	$300,390	$285,765	$14,625	$198,348

Historically there was an issue with fund ending balances between Ohio EPA reports and District reports. The District reconciled Table O-8 back to the ending balance of 2017. The values documented in Table O-8 are actual and match the County Auditor reports. Adjustments were not tracked prior to 2017.

C. Alternative Budget

The SWMD does not anticipate the need to identify any type of contingent funding or financing that would be necessary to fund any type of program activity in conjunction with Plan implementation efforts. As such, Tables O-8 through O-11 are not included in this analysis.

Plan Update Budget Demonstration Policy

The budget projections were prepared in good faith using the best and most current information available. The District has prepared the budget section of this *Plan Update* to meet the requirements in the Ohio Revised Code, Section 3734.53 (A)(13)(d):

The methods of financing implementation of the plan and a demonstration of the availability of financial resources for that purpose.

The budget tables prepared for this *Plan Update* demonstrates that the District has the financial funding throughout the planning period to implement the planned programs and initiatives.

Nothing contained in these budget projections should be construed as a binding commitment by the District to spend a specific amount of money on a particular strategy, facility, program and/or activity. The Board, with the advice and assistance of the District Coordinator, will review and revise the budget as needed to implement the planned strategies, facilities, programs and/or activities as effectively as possible with the funds available.

Revenues, not otherwise committed to an existing strategy, facility, program, or activity may be used to increase funding to improve the effectiveness of an existing strategy, facility, program or activity and to provide funding for a new strategy, facility, program or activity the Board concludes is justified based on the District Coordinator's recommendations and the content of this *Plan Update*.

The District reserves the right to revise the budget and reallocate funds as programs change or when otherwise determined to be in the best interest of the District. If the budget in this *Plan Update* is affected to the point that it must be revised, the District will first determine if a material change in circumstance has occurred. If a material change in circumstance has not occurred but budget revisions are needed that go beyond normal adjustments, the District may revise the budget per ORC Section 3734.56(E) and follow the appropriate ratification requirements to finalize the budget revisions.

The District is committed to implementing planned strategies, facilities, programs and/or activities in a cost-effective manner. The District is committed to improving the effectiveness and reduce the cost of all District strategies, facilities, programs, and activities. The District Board is authorized to expend District funds among other uses included in the *Plan Update* when costs are reduced. Additionally, the Board is authorized to use reduced costs to provide grant funds or direct funding to evaluate, test and/or implement new strategies, facilities, programs, and activities that are in compliance with this *Plan Update* are not a "material change in circumstance" regarding the implementation of this *Plan Update*.

Any transfer of funding between line items will not constitute a material change of circumstances or require a ratification of the budget unless deemed necessary by the Board of Commissioners. The Board of Commissioners will determine if a material change in circumstances has occurred and will refer to Appendix A for those requirements and guidelines.

APPENDIX P

DESIGNATION

Appendix P. Designation

A. Statement Authorizing/Precluding Designation

ORC Section 3734.53(E)(1) requires a solid waste management plan to provide a clear statement as to whether the board of county commissioners or directors is authorized to or precluded from establishing facility designations under ORC Section 343.01.

1. Authorization Statement to Designate

The Board of Directors of the District is hereby authorized to establish facility designations in accordance with Sections 343.013, 343.014, and 343.015 of the Ohio Revised Code. The District current designates the Huron County Transfer Facility. Appendix Q includes a complimentary rule (15-1) that requires all solid waste generated within Huron County must be delivered to the Huron County Transfer Facility. The facility listed below in this Section is the only facility designated for the disposal or transfer of municipal solid waste generated in this District. Any solid waste transfer, disposal, recycling, or resource recovery facilities that are not designated will require designation or a waiver to accept solid waste generated within the District.

B. Designated Facilities

Table P-1. Facilities Designated

Facility Name	County	State	Facility Type	Year Designated
Huron County Transfer Station	Huron	OH	Transfer Station	2011

The currently designated facilities for the solid waste generators are shown in Table P-1. The District maintains only one designated facility, the Huron County Transfer Station.

1. Description of the SWMD's Designation Process

In the approved Plan under which the District is currently operating, the District is authorized to establish facility designations in accordance with Sections 343.013, 343.014, and 343.015 of the Ohio Revised Code. The District has designated the Huron County Transfer Station as the only facility to which municipal solid waste generated in the District may be taken per 343.013 and the resolution contained in Appendix P.

Appendix Q includes a complimentary rule (15-1) that requires all solid waste generated within Huron County must be delivered to the Huron County Transfer Facility. The facility listed above in Table P-1 of this Section is the only facility designated for the disposal or transfer of

municipal solid waste generated in this District. Any solid waste transfer, disposal, recycling, or resource recovery facilities that are not designated will require designation or a waiver to accept solid waste generated within the District.

2. Waiver Process for the Use of Undesignated Facilities

The Board of Directors of the District developed the procedure established in a resolution adopted by the Board of Directors in 2014 and set forth in Appendix Q rule number 15-2, for a waiver process to allow exempt or other wastes to be disposed of at facilities other than those designated under Section A of this section.

The Board, pursuant to Section 343.01(I)(2) of the Ohio Revised Code, and subject to the terms and conditions set forth herein, will grant a contractor a waiver from the District's facility designations for the purpose of authorizing the contractor to deliver the solid waste identified in the contract's waiver request to the facility or facilities specified in the waiver request, provided that at no time shall such solid waste be delivered to a facility that lacks the necessary governmental permits and licenses to operate. The waiver agreement does not apply to any solid waste other than the solid waste identified in the contractor's waiver request. The following are obligations of any contractor that enters into a waiver agreement with the District:

- Contractor agrees to pay the District a waiver fee of $12.00 per ton for each ton of solid waste generated within the District that contractor delivers or causes to be delivered to a facility other than the Huron County Transfer Station. The waiver fee is subject to change at the discretion of the Board of Directors.

- Contractor shall forward payment of the waiver fee to the District on a monthly basis, on or before the last day of the month following the month in which the solid waste was delivered.

Contractor shall submit with its waiver fee payment a completed waiver fee statement, on a form prescribed by the District, that certifies and identifies the tonnage of Solid Waste generated within the District that contractor delivers or causes to be delivered to a facility other than the Huron County Transfer Station, and the amount of the waiver fee required to be paid on such tonnage pursuant to the agreement. Contractor shall submit with its completed waiver fee statement copies of weight slips or load tickets from the receiving facility verifying the weight of the solid waste delivered pursuant to the waiver agreement.

C. Documents

HURON COUNTY
SOLID WASTE MANAGEMENT DISTRICT

TO: Huron County Waste Generators / Haulers

FROM: Peter J. Welch, PG
Solid Waste Management District Coordinator

DATE: October 4, 2012

RE: Designation of Facility for Solid Waste generated in Huron County

On April 26, 2011 the Board of County Commissioners of Huron County adopted Resolution No.11-121 designating the Huron County Transfer Station located at 2415 Townline Road 131 Willard, Ohio as the only facility authorized to receive solid waste generated within the Huron County Solid Waste Management District for disposal or transfer under Sections 343.013 (B) and 343.01 (I) (2) of the Ohio Revised Code. A copy of this resolution is enclosed for your review.

Pursuant to the Ohio Revised Code Sections 343.01 (I) (2) and 343.99 it is illegal to deliver solid waste generated in the District to any solid waste disposal, transfer, recycling, or resource recovery facility unless a waver has been granted, and each day of violation is subject to a penalty of up to $5,000. Failure to pay generation fees on the disposal or transfer of solid waste generated in the District is subject to a ten percent late payment penalty for each month the generation fee is late, and a penalty of up to $10,000 per day for each violation, RC 3734.99 (A) and Ohio Administrative Code 3745-502-03.

Should you have any questions please contact me at (419) 668-3092.

Enclosure

Peter J. Welch, P.G.
Solid Waste Coordinator

Printed on Recycled Paper

180 Milan Avenue • Norwalk, OH 44857
Ph: (419) 668-3092 • Fax: (419) 663-3370

April 26, 2011

11-121

RESOLUTION

RESOLUTION DESIGNATING THE HURON COUNTY TRANSFER STATION PURSUANT TO SECTION 343.013 OF THE OHIO REVISED CODE

Joe Hintz moved the passage of the following resolution:

WHEREAS, the Board of County Commissioners owns and operates the Huron County Transfer Station located at 2415 Townline Road 131 West, Willard, Ohio, 44890; and

WHEREAS, on October 12, 2010, the Board of County Commissioners adopted Resolution No. 10-342 to issue county transfer station improvement general obligation bonds, having a maturity of twenty years, for purposes of repairing and improving the Huron County Transfer Station.

NOW, THEREFORE, BE IT RESOLVED by the Board of Commissioners of Huron County, Ohio acting in its capacity as the board of directors of the Huron County Solid Waste Management District:

SECTION 1. Pursuant to Section 343.013(B) of the Ohio Revised Code, the Board of County Commissioners designates the Huron County Transfer Station located at 2415 Townline Road 131 West, Willard, Ohio, 44890 as the facility where all solid waste generated within the Huron County Solid Waste Management District shall be taken for disposal, transfer, resource recovery or recycling. This designation shall take effect immediately, and shall remain in effect until all debt issued to finance the Huron County Transfer Station has been retired, or the Board of County Commissioners expressly terminates the designation by resolution.

SECTION 2. Pursuant to Section 343.01(I)(2), no person, municipal corporation, township, or other political subdivision shall deliver, or cause the delivery of, solid waste generated within the Huron County Solid Waste Management District to any solid waste disposal, transfer, recycling or resource recovery facility, other than Huron County Transfer Station located at 2415 Townline Road 131 West, Willard, Ohio, 44890, unless the Board of County Commissioners has granted a waiver pursuant to Section 343.01(I)(2) of the Ohio Revised Code authorizing the delivery of all or a portion of the solid waste generated in a municipal corporation or township to a solid waste disposal, transfer, recycling, or resource recovery facility other than the Huron County Transfer Station.

SECTION 3. It is found and determined that all formal actions of this Board of County Commissioners concerning and relating this resolution were adopted in an open meeting of this Board, and that all deliberations of this Board of County Commissioners that resulted in such formal action were in meetings open to the public in compliance with the law.

Larry J Silcox seconded the motion and the roll being called upon its adoption, the vote resulted as follows:

____ absent Gary W. Bauer

Yes Joe Hintz Joe Hintz

YES Larry J. Silcox Larry J. Silcox

CERTIFICATION

I do hereby certify that the above is a true and correct copy of the resolution passed by the Board of Huron County Commissioners on 4/26/11 and is recorded in the Commissioners Journal Volume 88.

Administrator/Clerk.

186317v1

44857
3-3370

APPENDIX Q

DISTRICT RULE

APPENDIX Q. District Rules

A. Existing Rules

According to Ohio Revised Code Section 3734.53(C), "the solid waste management plan of a county or joint district may provide for the adoption of rules under division (G) of section 343.01 of the Revised Code after approval of the plan under section 3734.521 or 3734.55 of the Revised Code." The District reserves the Authority for the Board to adopt rules under the provision of Ohio Revised Code.

The District plan reserved for the Board of Directors the power to make and enforce rules to the fullest extent authorized by Ohio law. Therefore, under the existing plan, the District is authorized to adopt, publish, and enforce rules doing any of the following:

1. Prohibiting or limiting the receipt of solid waste generated outside the district or outside a service area prescribed in the solid waste management plan or amended plan, at facilities covered by the plan.

2. Governing the maintenance, protection, and use of solid waste collection or other solid waste facilities located within the district.

3. Governing the development and implementation of a program for the inspection of solid waste generated outside the boundaries of this state that are disposed of at solid waste facilities included in the district's solid waste management plan or amended plan.

4. Exempting the owner or operator of any existing or proposed solid waste facility provided for the plan or amended plan from compliance with any amendments to a township zoning resolution.

The following section summarizes the existing rules of the District:

Rule 15-1 – Delivery of Solid Waste to Designated Facilities

No person, partnership, association, form, corporation, limited liability company, municipal corporation, township, or other political subdivision, shall deliver, or cause the delivery of, any solid waste generated within the Huron County Solid Waste District to any other solid waste transfer, disposal, recycling, or resource recovery facility other than the County-owned and operated Huron County Transfer Facility located at 2415 Townline Road, Willard, Ohio, 44890, unless a waiver from this rule has been granted by the Board of County Commissioners of Huron County pursuant to District Rule No. 15-2. For the purpose of this District Rule No. 15-1, 'solid waste" shall have the same meaning as Section 3734.01 of the Ohio Revised Code, and shall not include the following unacceptable wastes:

- Asbestos (friable and non-friable)
- Dedicated loads of Yard Waste
- Explosive and ordinance materials
- Hazardous Waste
- Liquid wastes, including used motor oil
- Radioactive materials; or
- Untreated infectious/pathological waste

Rule 15-2 – Waiver from Designation

Upon the request of person, partnership, association, form, corporation, limited liability company, municipal corporation, township, or other political subdivision, the Board of County Commissioners of Huron County may grant a waiver from District Rule 15-1 requiring the delivery of solid waste generated within the Huron County Solid Waste District to the Huron County Transfer Facility if the Board finds that delivery of such solid waste to another facility:

a) Is not inconsistent with the projections contained in the Huron County Solid Waste District's approved solid waste management Plan under Sections 3734.53 (A)(6) and (7) of the Ohio Revised Code;

b) Will not adversely affect the implementation and financing of the Plan;

c) The parties requesting the waiver have entered into a written agreement with the Huron County Solid Waste District setting forth the terms and conditions of the waiver, including the payment of a waiver fee to the District.

B. Proposed Rules

At the time that this 2024 *Plan Update* was developed, the District was not proposing any new rules. the District may, as they deem appropriate, amend or rescind the existing rules or may adopt any additional rules that are necessary to implement the ratified and approved Solid Waste Management Plan. Since changes may occur during the planning period, the District reserves for the Board of Directors the power to make and enforce rules to the fullest extent authorized by Ohio law.

The Ohio Revised Code, Section 343.01 (G) gives solid waste districts the authority to adopt, publish, and enforce rules to the extent authorized by the solid waste management plan of the district approved under Section 3734.521 or 3734.55 of the Revised Code or subsequent amended plans of the district approved under Section 3734.521 or 3734.56 of the Revised Code.

This plan authorizes the Huron County Solid Waste Management District Board of Directors to adopt, publish, and enforce rules.

Any rule promulgated by the District shall be designed to promote the health, safety and welfare of the residents of the District, effective and efficient administration and operation of the District, to comply with state requirements and/or to implement the Solid Waste Management Plan and amended Plan of the District. The District may conduct all reviews, investigations, evaluations, studies and hearings as the District deems necessary and appropriate to determine the character, degree and scope of any proposed rule.

Rule adoption shall follow the procedures listed in Section C before becoming final.

Rule Making Authority – ORC 343.01

The solid waste management plan provides the authority to the Board of Directors to adopt, publish, and enforce all of the rule-making powers authorized by Ohio Revised Code 343.01, Divisions (G)(1), (G)(2), (G)(3) and (G)(4) including the following:

ORC 343.01(G)(1)

To the extent authorized by the solid waste management plan of the district approved under section 3734.521 or 3734.55 of the Revised Code or subsequent amended plans of the district approved under section 3734.521 or 3734.56 of the Revised Code, the board of county commissioners of a county district or board of directors of a joint district may adopt, publish, and enforce rules doing any of the following:

(1) Prohibiting or limiting the receipt of solid wastes generated outside the district or outside a service area prescribed in the solid waste management plan or amended plan, at facilities located within the solid waste management district, consistent with the projections contained in the plan or amended plan under divisions (A)(6) and (7) of section 3734.53 of the Revised Code. However, rules adopted by a board under division (G)(1) of this section may be adopted and enforced with respect to solid waste disposal facilities in the solid waste management district that are not owned by a county or the solid waste management district only if the board submits an application to the director of environmental protection that demonstrates that there is insufficient capacity to dispose of all solid wastes that are generated within the district at the solid waste disposal facilities located within the district and the director approves the application. The demonstration in the application shall be based on projections contained in the plan or amended plan of the district. The director shall establish the form of the application. The approval or disapproval of such an application by the director is an action that is appealable under Section 3745.04 of the Revised Code.

In addition, the director of environmental protection may issue an order modifying a rule adopted under division (G)(1) of this section to allow the disposal in the district of solid wastes from another county or joint solid waste management district if all of the following apply:

(a) The District in which the wastes were generated does not have sufficient capacity to dispose of solid wastes generated within it for six months following the date of the director's order;

(b) No new solid waste facilities will begin operation during those six months in the district in which the wastes were generated and, despite good faith efforts to do so, it is impossible to site new solid waste facilities within the district because of its high population density;

(c) The District in which the wastes were generated has made good faith efforts to negotiate with other districts to incorporate its disposal needs within those districts' solid waste management plans, including efforts to develop joint facilities authorized under section 343.02 of the Revised Code, and the efforts have been unsuccessful;

(d) The District in which the wastes were generated has located a facility willing to accept the district's solid wastes for disposal within the receiving district;

(e) The District in which the wastes were generated has demonstrated to the director that the conditions specified in divisions (G)(1)(a) to (d) of this section have been met;

(f) The director finds that the issuance of the order will be consistent with the state solid waste management plan and that receipt of the out-of-district wastes will not limit the capacity of the receiving district to dispose of its in-district wastes to less than eight years.

Any order issued under division (G)(1) of this section shall not become final until thirty days after it has been served by certified mail upon the county or joint solid waste management district that will receive the out-of-district wastes.

ORC 343.01(G)(2)

Governing the maintenance, protection, and use of solid waste collection or other solid waste facilities located within its district. The rules adopted under division (G)(2) of this section shall not establish design standards for solid waste facilities and shall be consistent with the solid waste provisions of Chapter 3734 of the Revised Code and the rules adopted under those provisions. The rules adopted under division (G)(2) of this section may prohibit any person, municipal corporation, township, or other political subdivision from constructing, enlarging, or modifying any solid waste facility until general plans and specifications for the proposed improvement have been submitted to and approved by the board of county commissioners or board of directors as complying with the solid waste management plan or amended plan of the district. The construction of such a facility shall be done under the supervision of the county sanitary engineer or, in the case of a joint district, a county sanitary engineer

designated by the board of directors, and any person, municipal corporation, township, or other political subdivision proposing or constructing such improvements shall pay to the county or joint district all expenses incurred by the board in connection therewith. The sanitary engineer may enter upon any public or private property for the purpose of making surveys or examinations necessary for designing solid waste facilities or for supervising the construction, enlargement, modification, or operation of any such facilities. No person, municipal corporation, township, or other political subdivision shall forbid or interfere with the sanitary engineer or his authorized assistants entering upon such property for that purpose. If actual damage is done to property by the making of the surveys and examinations, a board shall pay the reasonable value of that damage to the owner of the property damaged, and the cost shall be included in the financing of the improvement for which the surveys and examinations are made.

ORC 343.01(G)(3)

Governing the development and implementation of a program for the inspection of solid wastes generated outside the boundaries of this state that are disposed of at solid waste facilities included in the district's solid waste management plan or amended plan. A board of county commissioners or board of directors or its authorized representative may enter upon the premises of any solid waste facility included in the district's solid waste management plan or amended plan for the purpose of conducting the inspections required or authorized by the rules adopted under division (G)(3) of this section. No person, municipal corporation, township, or other political subdivision shall forbid or interfere with a board of county commissioners or directors or its authorized representative entering upon the premises of any such solid waste facility for that purpose.

ORC 343.01(G)(4)

Exempting the owner or operator of any existing or proposed solid waste facility provided for in the plan or amended plan from compliance with any amendment to a township zoning resolution adopted under section 519.12 of the Revised Code or to a county rural zoning resolution adopted under section 303.12 of the Revised Code that rezoned or redistricted the parcel or parcels upon which the facility is to be constructed or modified and that became effective within two years prior to the filing of an application for a permit required under division (A)(2)(a) of section 3734.05 of the Revised Code to open a new or modify an existing solid waste facility.

Rule Making Authority – ORC 3734.53

The solid waste management plan provides the authority to the Board of Directors to adopt, publish, and enforce all of the rule-making powers authorized by Ohio Revised Code 3734.53, Division (C) including the following:

(1) Prohibiting or limiting the receipt at facilities covered by the plan of solid wastes generated outside the district or outside a prescribed service area consistent with the projections under divisions (A)(6) and (7) of this section, except that the director of environmental protection may issue an order modifying a rule authorized to be adopted under division (C)(1) of this section to allow the disposal in the district of wastes from another county or joint solid waste management district if all of the following apply:

(a) The district in which the wastes were generated does not have sufficient capacity to dispose of solid wastes generated within it for six months following the date of the director's order;

(b) No new solid waste facilities will begin operation during those six months in the district in which the wastes were generated and, despite good faith efforts to do so, it is impossible to site new solid waste facilities within the district because of its high population density;

(c) The district in which the wastes were generated has made good faith efforts to negotiate with other districts to incorporate its disposal needs within those districts' solid waste management plans, including efforts to develop joint facilities authorized under section 343.02 of the Revised Code, and the efforts have been unsuccessful;

(d) The district in which the wastes were generated has located a facility willing to accept the district's solid wastes for disposal within the receiving district;

(e) The district in which the wastes were generated has demonstrated to the director that the conditions specified in divisions (C)(1)(a) to (d) of this section have been met;

(f) The director finds that the issuance of the order will be consistent with the state solid waste management plan and that receipt of the out-of-district wastes will not limit the capacity of the receiving district to dispose of its in-district wastes to less than eight years. Any order issued under division (C)(1) of this section shall not become final until thirty days after it has been served by certified mail upon the county or joint solid waste management district that will receive the out-of-district wastes.

(2) Governing the maintenance, protection, and use of solid waste collection, storage, disposal, transfer, recycling, processing, and resource recovery facilities within the district and requiring the submission of general plans and specifications for the construction, enlargement, or modification of any such facility to the board of county commissioners or board of directors of the district for review and approval as complying with the plan or amended plan of the district;

(3) Governing development and implementation of a program for the inspection of solid wastes generated outside the boundaries of the state that are being disposed of at solid waste facilities included in the district's plan;

(4) Exempting the owner or operator of any existing or proposed solid waste facility provided for in the plan from compliance with any amendment to a township zoning resolution adopted under Section 519.12 of the Revised Code or to a county rural zoning resolution adopted under Section 303.12 of the Revised Code that rezoned or redistricted the parcel or parcels upon which the facility is to be constructed or modified and that became effective within two years prior to the filing of an application for a permit required under division (A)(2)(a) of Section 3734.05 of the Revised Code to open a new or modify an existing solid waste facility.

C. Rule Approval Process

Proposed rules shall be adopted and enforced by the Board of Directors as provided in section 343.01(G).

APPENDIX R

BLANK SURVEY FORMS AND RELATED INFORMATON

Huron County Solid Waste District

2020 Business Recycling Survey

This recycling survey is being conducted by the Huron County Solid Waste District to identify the type and amount of recyclables generated **within Huron County during 2020**. The District will use this information for summary purposes only; no company's survey response will be reported individually. Your response to this survey will help measure Huron County's progress toward state-mandated recycling goals and help us provide programs that meet local needs.

PLEASE RETURN COMPLETED SURVEY BY **APRIL 2, 2021** USING ONE OF THESE METHODS:

Email: ktruax@gtenvironmental.com
Fax: (614) 899-9255

If you have any questions or need assistance completing the survey,
contact the District's consultant, Katherine Truax, at (614) 964-7294 or the email above.

1. Contact Information (this information will be kept private):

Company Name: _____

Company Mailing Address: _____

Contact Name: _____Number of Employees: _____

Phone Number: _____ Email address: _____

☐ I would like someone to reach out to me for more information about recycling options.

2. Does your organization recycle? (please check one)

☐ Yes **(CONTINUE)**
☐ No **(END – Please return survey as directed above)**

3. Materials Recycled in 2019

Please complete the following table (cont. on other side) by reporting the amount of materials recycled in **2020** that were generated ***within* Huron County**. In the "Amount" column, enter the quantity recycled in 2020, then check the unit of measurement in the "Measurement" column. You may estimate if necessary. In the "Recycler" column, please indicate the hauler that collects the reported material or where the material will go after it leaves your establishment.

Material	Amount	Measurement	Name of Recycler or Hauler
Example: Mixed/Commingled Recycling	*3.5*	☐ Pounds ☒ Tons ☐ Cubic Yards	*Recycling Brothers of Ohio*
Mixed/Commingled Recycling		☐ Pounds ☐ Tons ☐ Cubic Yards	
Paper (Newsprint, Office, Glossy, Books etc.)		☐ Pounds ☐ Tons ☐ Cubic Yards	
Cardboard/Paperboard		☐ Pounds ☐ Tons ☐ Cubic Yards	
Glass		☐ Pounds ☐ Tons ☐ Cubic Yards	
Plastics (#1-#7)		☐ Pounds ☐ Tons ☐ Cubic Yards	

Material	Amount	Measurement	Name of Recycler or Hauler
Other Plastic Bags/Film Plastics		☐ Pounds ☐ Tons ☐ Cubic Yards	
Ferrous Metals (Steel, Iron): *NO* auto bodies or construction/demolition materials such as rebar		☐ Pounds ☐ Tons ☐ Cubic Yards	
Non-Ferrous Metals (Aluminum, Copper, Brass): *NO* auto bodies or construction/demolition materials such as aluminum siding		☐ Pounds ☐ Tons ☐ Cubic Yards	
Wood (Excluding Pallets)		☐ Pounds ☐ Tons ☐ Cubic Yards	
Wood - Pallets		☐ Pounds ☐ Tons ☐ Cubic Yards ☐ Number/Units	
Food *NO* Cooking Oil		☐ Pounds ☐ Tons ☐ Cubic Yards ☐ Gallons	
Yard Waste (Grass, Leaves, Branches)		☐ Pounds ☐ Tons ☐ Cubic Yards	
Appliances (White Goods)		☐ Pounds ☐ Tons ☐ Cubic Yards ☐ Number/Units	
Rubber (Excluding Tires)		☐ Pounds ☐ Tons ☐ Cubic Yards	
Used Tires		☐ Pounds ☐ Tons ☐ Cubic Yards ☐ Number/Units	
Electronics (Residential: Computers, TVs, Cellphones, etc.)		☐ Pounds ☐ Tons ☐ Cubic Yards	
Dry-cell/Household Batteries		☐ Pounds ☐ Tons ☐ Cubic Yards ☐ Gallons	
Lead-acid Batteries (i.e. Automotive Batteries)		☐ Pounds ☐ Tons ☐ Cubic Yards ☐ Number/Units	
Ink/Toner Cartridges		☐ Pounds ☐ Tons ☐ Cubic Yards ☐ Number/Units	
Textiles (Clothing, Fabrics)		☐ Pounds ☐ Tons ☐ Cubic Yards	
Non-Exempt Foundry Sand		☐ Pounds ☐ Tons ☐ Cubic Yards	
Ash (recycled only)		☐ Pounds ☐ Tons ☐ Cubic Yards	
Flue Gas Desulfurization Waste		☐ Pounds ☐ Tons ☐ Cubic Yards	
Other (specify): _____		☐ Pounds ☐ Tons ☐ Cubic Yards	
Other (specify): _____		☐ Pounds ☐ Tons ☐ Cubic Yards	

(Optional): The following chart may provide assistance with calculating cardboard recycling:

Cardboard Dumpster	Size of Dumpster (cubic Yards) (a)	Percentage Full When Picked Up (b)	No. of Pickups per Week (c)	Estimated Cardboard Recycled (Tons) (a) x (b) x (c) x 52 / 20
Example	*6 cubic yards*	*80% full*	*1 time/week*	*(6 x 0.80 x 1 x 52 / 20) = 12.48 tons*
1				
2				
3				
Total Cardboard Recycled in Tons (Enter in Cardboard row below)				

THANK YOU FOR YOUR HELP!

APPENDIX S

SITING STRATEGY

APPENDIX S. Siting Strategy

The District does not, as a part of this Plan, intend to site any District owned or operated facilities for the transfer or disposal of municipal solid waste. The following addresses the possibility that another party wishes to site a solid waste transfer, disposal, recycling, or resource recovery facility in any location that is located in this District.

The District Board of Directors shall review general plans and specifications under the rules adopted by the Board and determine whether the solid waste facility proposal complies with the Plan. If the Board decides that it will facilitate the review process, the Board may appoint a Siting Committee within sixty days of receipt of plans and specifications under the siting rules. The Siting Committee may include the individuals, or their representatives listed herein, in addition to any other individuals that the Board determines would provide information relevant to the Board's determination of whether the proposed solid waste transfer, disposal, recycling or resource recovery facility or a proposal to modify an existing facility complies with the Plan. The Board may designate a Committee Chair, who will be responsible to facilitate the work of the Siting Committee and to prepare a report to the Board if requested.

The Siting Committee may include the following representatives:

- A representative from each of the three County Boards of Commissioners;
- A representative of each County Board of Health; and
- A representative of each County Planning Commission.
- If a location proposed for the facility is within a township or townships, the Board may appoint at least one trustee from the proposed host township(s).
- If the proposed location is within a municipality, at least one municipal official from that municipality may be appointed to the Siting Committee.
- The use of a consultant and/or support for the committee by District staff or other staff from any of the counties may be considered.

The purpose of the Siting Committee is to assemble and organize information relevant to the Board's determination under the siting rule and to forward that information to the Board for use in making its determination. The Siting Committee has no decision-making authority. The Board may require the Siting Committee to prepare a report summarizing the information it has compiled. The information may include the following:

1. The District Solid Waste Management Plan;
2. The District rules;

3. Current Ohio and U.S. EPA rules and regulations governing the siting of the appropriate type of facility;

4. Maps and data for the county showing political jurisdictions, natural features such as rivers, streams, wetlands, flood plains, watershed and aquifer boundaries, geology, and topography;

5. Maps and data for the county showing land use, such as public and private utilities, archeological and historical sites, parks and recreation areas, threatened species habitat, transportation patterns, airports, etc.; and

6. Zoning maps.

The Siting Committee, upon appointment, shall conduct its data compilation duties within sixty to ninety days. The Board may grant the Siting Committee an additional thirty days to fulfill its obligation.

APPENDIX T

MISCELLANEOUS PLAN DOCUMENTS

APPENDIX T. Miscellaneous Required Information

During the process of preparing the plan, the policy committee signs three official documents certifying the plan. These documents are as follows.

1. Certification Statement for the Draft of the Solid Waste Management Plan- The policy committee signs this statement to certify that the information presented in the draft plan submitted to the Ohio EPA is accurate and complies with format 4.1.

CERTIFICATION STATEMENT FOR THE DRAFT PLAN

We as representatives of the Solid Waste Management Policy Committee (SWMPC) of the Huron County Solid Waste Management District (District), do hereby certify that to the best of our knowledge and belief, the statements, demonstrations and all accompanying materials that comprise the draft Huron County Solid Waste Management Plan Update, and the availability of and access to sufficient solid waste management facility capacity to meet the solid waste management needs of the District for the ten year period covered by the Plan Update are accurate and are in compliance with the requirements in the *District Solid Waste Management Plan Format*, revision 4.1.

_____ _____

Representing the County Commissioners Date Signed

_____ _____

Representing CEO of Largest City Date Signed

_____ _____

Representing County Health Department Date Signed

_____ _____

Representing Townships Date Signed

_____ _____

Representing Commercial/Industrial Generators Date Signed

_____ _____

Representing the General Interest of Citizens Date Signed

_____ _____

Representing the Public Date Signed

APPENDIX U

RATIFICATION RESULTS

APPENDIX V

INVENTORY OF OPEN DUMPS AND OTHER DISPOSAL FACILITIES

APPENDIX V. Inventory of Open Dumps and Other Disposal Facilities

In accordance with Ohio Revised Code 3734.53(A)(2) and (A)(6) the District must provide an inventory of the following facilities in the District.

> Solid Waste open dump sites, including scrap tires
> Disposal facilities for fly ash and bottom ash, foundry sand, and slag.

Solid Waste Management and Recycling Inventories Requirement

> Ohio Revised Code Section 3734.53 (A)(2) requires "…an inventory of all existing facilities where solid wastes are being disposed of, all resource recovery facilities, and all recycling activities within the district. The inventory shall identify each such facility or activity and, for each disposal facility, shall estimate the remaining disposal capacity available at the facility. The inventory shall be accompanied by a map that shows the location of each such existing facility or activity.

A. Existing Open Dumps and Waste Tire Dumps

Table V-1 Existing Solid Waste Open Dumps

Site Location (either address or description of site location)	Materials at Site (solid waste and/or scrap tires)
None	

B. Ash, Foundry Sand, and Slag Disposal Sites

Table V-2 Existing Ash, Foundry Sand, and Slag Disposal Sites

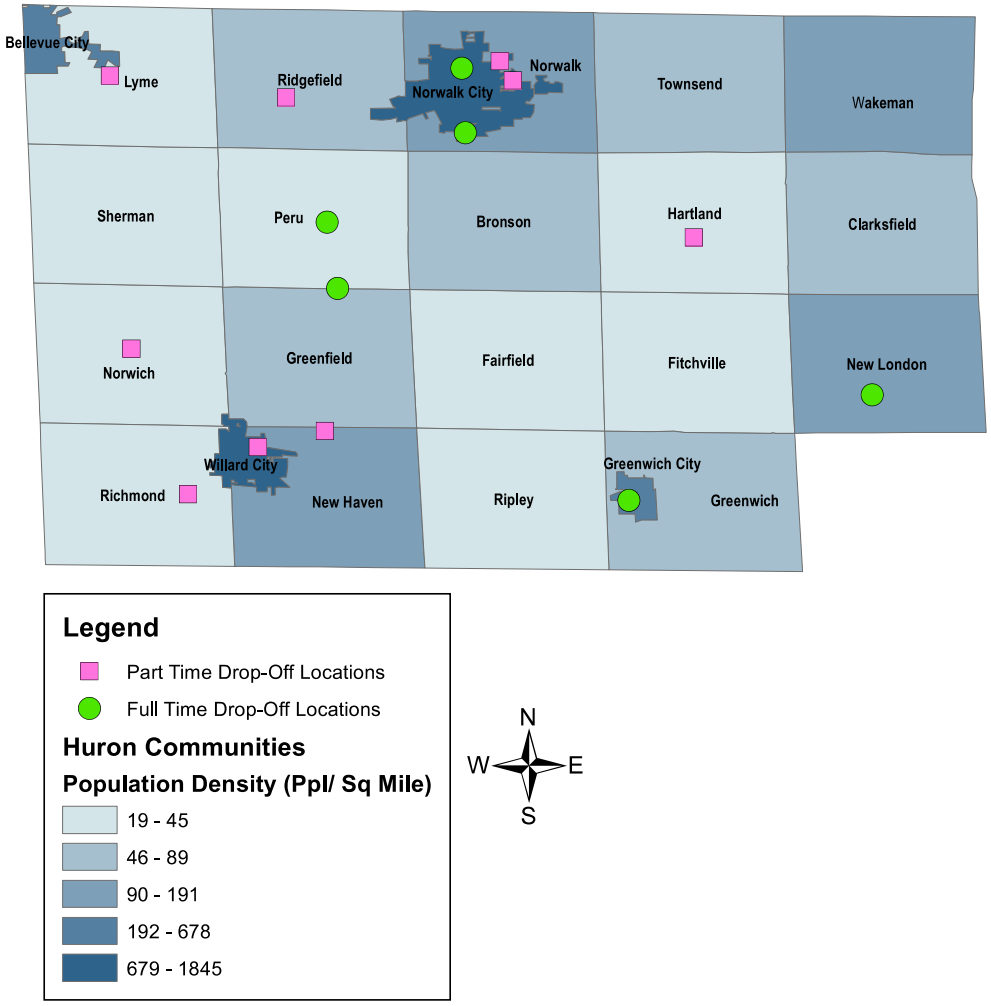
Site Location (Address, description of site location)	Materials at Site (fly ash, bottom ash, foundry sand, and/or slag)
None	

APPENDIX W

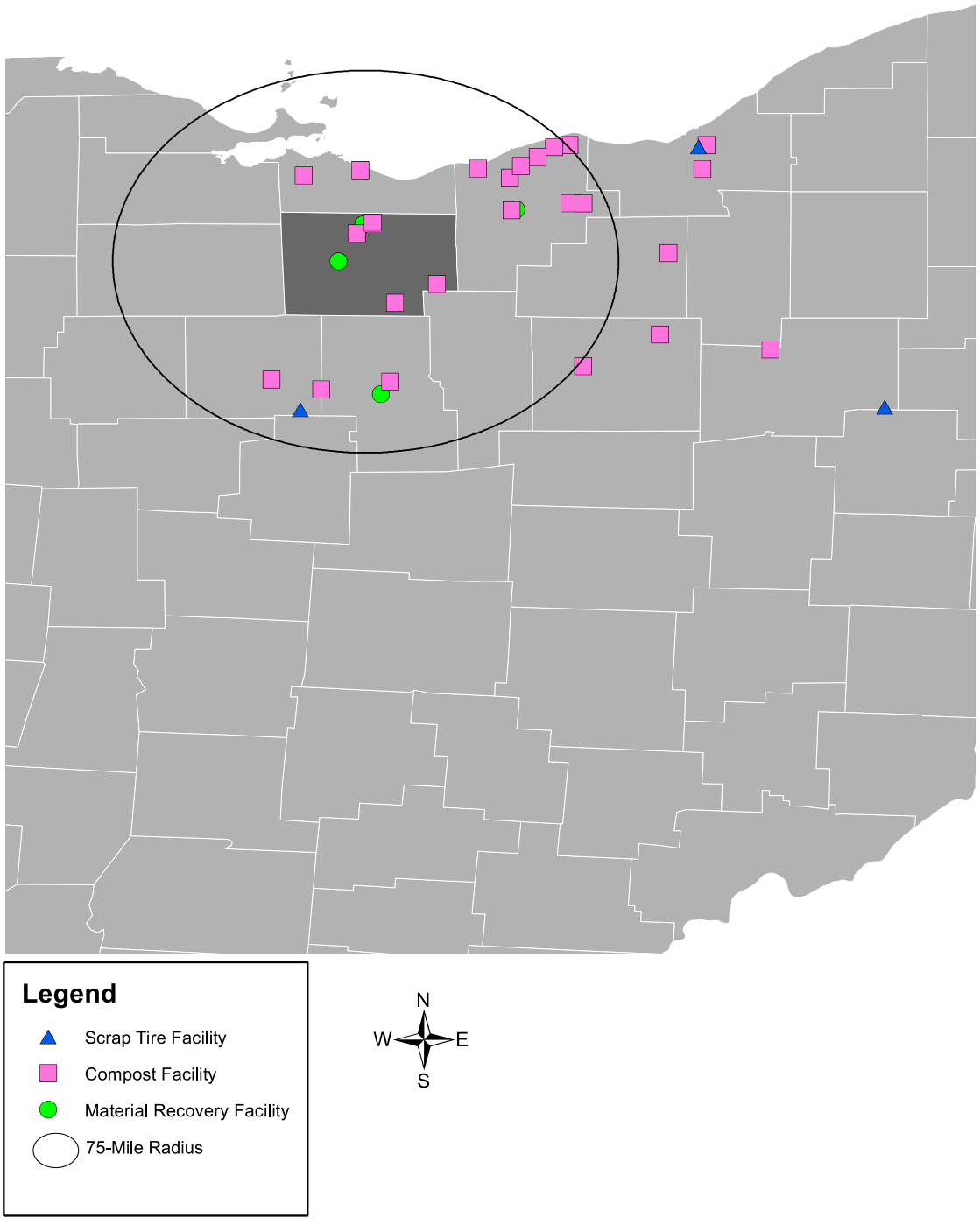
DISTRICT MAP

APPENDIX W. District Map

Drop-Off Collection Locations



Regional Recovery Facilities



Regional Disposal Facilities